# Demise of Russian-Chinese Arms Relationship and Its Korean Implications

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# Abstract

China and Russia share a concern with the evolving political, military, and economic situation on the Korean peninsula, which borders both countries. In terms of relative influence in Pyongyang, however, Beijing enjoys a clearly dominant role, while Moscow often struggles to maintain even a supporting position. One development that might further increase this gap is the abrupt decrease in recent Chinese purchases of Russian defense technologies and weapons systems. The major reason for this transformation has been that the Chinese defense industry has become capable of producing much more sophisticated armaments. Moscow now confronts the choice of either accepting a greatly diminished share of the Chinese arms market or agreeing to sell even more advanced weapons to Beijing. In addition to threatening existing force balances in East Asia, such transfers could further strengthen China's ability to compete for sales on third-party markets. Thus far, surging Russian arms sales to other countries have allowed Russian policy makers to accept the decreasing Chinese military purchases rather than risk the transfer of new technologies. Even so, the threat to Russian arms exports presented by the global recession may cause more Russians to seek short-term profits by allowing the sale to China of even their most advanced systems, which would make China and even more formidable competitor for sales to North Korea and other third-party markets.

Key Words: Russia, China, arms, weapons, Rosoboronexport

This year, the Russian and Chinese governments are marking the 60<sup>th</sup> anniversary of the establishment of diplomatic relations between Moscow and the People's Republic of China (PRC). The two governments have issued a series of joint statements affirming their common approach to important international questions. For example, their 60<sup>th</sup> anniversary joint statement, devoted several paragraphs to their "grave concern over the situation on the Korean peninsula." The two governments have repeatedly called for a peaceful resolution of the dispute over North Korea's nuclear weapons within the framework of the Six-Party Talks.

## Introduction

China and Russia share a concern with the evolving political, military, and economic situation on the Korean peninsula, which borders both countries. The governments in Beijing and Moscow have opposed North Korea's acquisition of nuclear weapons while simultaneously resisting international initiatives that they believe could create chaos on the Korean peninsula. Both Beijing and Moscow desire a change in Pyongyang's behavior, but not a change in its regime. They remain more concerned about the potential immediate collapse of the North Korean state than about its government's intransigence on the nuclear question. Despite their differences with Kim Jong-il, Chinese and Russian leaders fear that the North Korea's disintegration could induce widespread economic disruptions in East Asia, generate large refugee flows across

<sup>1- &</sup>quot;China, Russia Sign Five-Point Joint Statement," Xinhua, June 17, 2009, http://news. xinhuanet.com/english/2009-06/18/content\_11558133.htm.

their borders, weaken Chinese and Russian influence in the Koreas by ending their unique status as interlocutors with Pyongyang, and potentially remove a buffer separating their borders from American ground forces (i.e., should the U.S. Army redeploy into northern Korea). At worst, the North Korea's collapse could precipitate a military conflict on the peninsula – which could spill across into Chinese or Russian territory. Policy makers in both countries appear to have resigned themselves to dealing with Kim Jong-il for now, while hoping a more accommodating leadership will eventually emerge in Pyongyang.

In terms of relative influence in Pyongyang, however, Beijing enjoys a clearly dominant role, while Moscow often struggles to maintain even a supporting position. One development that might further increase this gap is the continuing deterioration of the Russia-China arms relationship. The abrupt decrease in Chinese purchases of Russian defense technologies and weapons systems has contributed both to a severe contraction of the overall level of commerce between the two countries as well as sharp turning of the terms of trade against Russia. Whereas before 2007 Russia racked up steady trade surpluses, during the last two years the terms of trade have been shifting markedly in China's favor due to a decline in Chinese purchase of weapons systems and other high-technology items and increasing Russian purchases of cheap Chinese cars, electronics, and other consumer goods. At present, Russian exports to China consist overwhelmingly of commodities, especially natural resources like oil and timber, while China sells mostly consumer goods such as household appliances, machinery, and other higher-value products to Russia. North Korea and other former Soviet allies now purchase many imported weapons from Chinese suppliers that in earlier years they acquired from

#### Russian sources.

After the United States and European governments imposed an arms embargo on China following the 1989 Tiananmen Square incident, China became one of Russia's most reliable purchasers of imported arms. In any given year, Beijing bought between one-fourth and one-half of Russia's weapons exports. Indeed, during most of the past two decades, Russian military exports to China constituted the most important dimension of the two countries' security relationship. Russian firms derived substantial revenue from the sales, which helped sustain Russia's military industrial complex during the lean years of the 1990s. For its part, China was able to acquire advanced conventional weapons that its developing defense industry could not yet manufacture. The PRC managed to purchase certain weapons systems from Israel and Brazil as well, but their portfolio of exportable arms is limited and Israel has proven susceptible to American pressure to curtail sales of advanced systems.

Recent years have seen a major change in this situation. The volume of Russian weapons sales to the Chinese military has experienced a precipitous decline. The major reason for this transformation has been that the Chinese defense industry has become capable of producing much more sophisticated armaments. Moscow now confronts the choice of either accepting a greatly diminished share of the Chinese arms market or agreeing to sell even more advanced weapons to Beijing. In addition to threatening existing force balances in East Asia, such transfers could further strengthen China's ability to compete for sales on thirdparty markets. Thus far, surging Russian arms sales to other countries has allowed Russian policy makers to accept the decreasing Chinese

military purchases rather than risk the transfer of new technologies. Even so, the threat to Russian arms exports presented by the global recession may cause more Russians to seek short-term profits by allowing the sale to China of even their most advanced systems, further enhancing Beijing's influence in Pyongyang.

# **Changing Market Conditions**

Since the two governments signed an agreement on militarytechnical cooperation in December 1992, the PRC has acquired almost all its defense imports from the Russian Federation — more than 90 percent.<sup>2</sup> During the 1990s, the value of these deliveries ranged up to one billion dollars annually. During the mid-2000s, this figure has sometimes exceeded two billion dollars per year. According to one estimate, between 1992 and 2006, the total value of Russian arms exports to China amounted to approximately \$26 billion worth of military equipment and weapons, or almost half of total Russian arms exports, estimated at more than \$58 billion during that period.3 In April 2009, Anatoly Isaikin, general director of Rosoboronexport, Russia's state-run arms export body, confirmed that the value of Russia-China defense cooperation since 2001 approximated \$16 billion, with the annual value of the exchanges

<sup>&</sup>lt;sup>2</sup>-Paul Holtom, "The Beginning of the End for Deliveries of Russian Major Conventional Weapons to China," RIA Novosti, March 31, 2008, http://en.rian.ru/analysis/20080331/ 102440239.html.

<sup>&</sup>lt;sup>3</sup>-David Lague, "Russia and China Rethink Arms Deals," New York Times, March 2, 2008, http://www.nytimes.com/2008/03/02/world/asia/02iht-arms.1.10614237.html; and Alexandra Gritskova, Konstantin Lantratov, and Gennady Sysoev, "Kitay slozhil rossiyskoe oruzhie" [China Sets Aside Russian Arms], Kommersant, May 7, 2007.

reaching up to \$2.7 billion. These sales helped make Russia the world's largest arms supplier to Asian countries between 1998 and 2005, well ahead of the United States 5

According to the Stockholm International Peace Research Institute (SIPRI), China received 39% of all the major conventional weapons – e.g., aircraft carriers, submarines, ship-launched missiles, and long-range strike, tanker and transport aircraft but not small arms and light weaponry - sold to foreign buyers during the 17-year history of the Russian Federation. Through these dealings, the Chinese Navy and Air Force have acquired dozens of Su-27 Flanker fighter jets and Su-30 Flanker multi-role aircraft optimized for anti-ship operations; Mi-17 transport helicopters; Il-76 military transport aircraft; IL-78M Midas in-flight refueling tanker aircraft; A-50 warning and control aircraft; T-72 main battle tanks; Mi-8 and Mi-17 helicopters; armored personnel carriers; Kilo-class Project 636 diesel submarines; several Sovremennyclass destroyers; a variety of anti-ship, air defense, and other missiles; and other advanced conventional military systems or their components. Between 1998 and 2004, moreover, the Chinese manufactured about a hundred Su-27Sk war planes under Russian license, using many Russian parts in the assembly process.

<sup>4-&</sup>quot;Gendirektor 'Rosoboroneksporta' Anatoliy Isaikin: Nesmotrya na krizis, eksport nashego oruzhiya stavit rekordy," Rossiiskaya Gazeta, April 10, 2009, http://www.rg.ru/ 2009/04/10/orujie.html.

<sup>&</sup>lt;sup>5</sup>-Richard F. Grimmett, Conventional Arms Transfers to Developing Nations, 1998-2005 (Washington, DC: Congressional Research Service, October 23, 2006), p. 32, http://fas. org/sgp/crs/weapons/RL33696.pdf.

Table 1. Sales of Major Russian Weapons Systems to China<sup>6</sup>

Weapon Designation	Weapon Description	Year of Order	Number Delivered
R-73/AA-11 Archer	SRAAM 1991		300
Su-27S/Flanker-B	FGA aircraft	1991	24
5V55R/SA-10C Grumble	SAM	1992	150
76N6/Clam Shell	Air surv radar	1992	1
Il-76M/Candid-B	Transport aircraft	1992	10
S-300PMU-1/SA-10D	SAM system	1992	4
ST-68U/Tin Shield	Air surv radar	1992	1
Su-27S/Flanker-B	FGA aircraft	1992	2
53-65K	AS torpedo	1993	75
TEST-71	AS/ASW torpedo	1993	75
Type-636E/Kilo	Submarine	1993	2
Type-877E/Kilo	Submarine	1993	2
Mi-8/Mi-17/Hip-H	Helicopter	1995	35
R-73/AA-11 Archer	SRAAM	1995	3000
Su-27S/Flanker-B	FGA aircraft	1995	24
9M38/SA-11 Gadfly	SAM	1996	150
Ka-27PL/Helix-A	ASW helicopter	1996	2
Sovremenny	Destroyer	1996	2
9M338/SA-15 Gauntlet	SAM	1997	400
Tor-M1/SA-15	Mobile SAM system	1997	15
9M338/SA-15 Gauntlet	SAM	1998	500
Ka-27PL/Helix-A	ASW helicopter	1998	8
Mi-8/Mi-17/Hip-H	Helicopter	1998	15
Tor-M1/SA-15	Mobile SAM system	1998	20
Kh-29/AS-14 Kedge	ASM	1999	100
Kh-59ME/AS-18 Kazoo	ASM	1999	150

<sup>6-</sup>The table is derived from data obtained from the Stockholm International Peace Research Institute, Trade Register Table of Major Conventional Weapons Transfers from Russia to China generated July 19, 2009, http://www.sipri.org/. It includes the weapon designation, weapon description, year of the order, and the number delivered/ produced from military arms sales from Russia to China from 1989 to 2008.

Weapon Designation	Weapon Description	Year of Order	Number Delivered
Su-27S/Flanker-B	FGA aircraft 1999		28
Su-30MK/Flanker	FGA aircraft 1999		38
AL-31FN	Turbofan	2000	54
Il-76M/Candid-B	Transport aircraft	2000	1
Moskit/SS-N-22	Anti-ship missile	2000	50
R-77/AA-12 Adder	BVRAAM	2000	700
48N6/SA-10D Grumble	SAM	2001	150
9M317/SA-17 Grizzly	SAM	2001	150
Fregat/Top Plate	Air surv radar	2001	8
Mi-8/Mi-17/Hip-H	Helicopter	2001	35
MR-90/Front Dome	Fire control radar	2001	8
S-300PMU-1/SA-10D	SAM system	2001	4
Su-30MK/Flanker	FGA aircraft	2001	38
Zhuk	Aircraft radar	2001	100
3M-54 Klub/SS-N-27	Anti-ship missile	2002	120
48N6/SA-10D Grumble	SAM	2002	150
53-65K	AS torpedo	2002	150
9M311/SA-19 Grison	SAM	2002	225
9M38/SA-11 Gadfly	SAM	2002	150
AK-630 30mm	Naval AA gun	2002	69
Moskit/SS-N-22	Anti-ship missile	2002	35
S-300FM/SA-N-20	naval SAM system	2002	2
Sovremenny	Destroyer	2002	2
TEST-71	AS/ASW torpedo	2002	150
Type-636E/Kilo	Submarine	2002	8
Zmei/Sea Dragon	MP aircraft radar	2002	1
Su-30MK/Flanker	FGA aircraft	2003	24
48N6E2/SA-10E	SAM	2004	297
S-300PMU-2/SA-10E	SAM system	2004	8
AK-176M 76mm	Naval gun	2005	5
AL-31FN	Turbofan	2005	100
Il-76M/Candid-B	Transport aircraft	2005	None delivered

Weapon Designation	Weapon Description	Year of Order	Number Delivered
Il-78M/Midas	Tanker/transport ac 2005		None delivered
Kh-59MK/AS-18	Anti-ship missile 2005		10
RD-33/RD-93	Turbofan	2005	18
48N6E2/SA-10E	SAM	2006	300
Mi-8/Mi-17/Hip-H	Helicopter	2006	24
S-300PMU-2/SA-10E	SAM system 2006		8

Table 2, Russian Weapons Produced under license in China<sup>7</sup>

Weapon Designation	Weapon Description	Year of Order	Number Produced
Su-27S/Flanker-B	FGA aircraft	1996	105
Kh-31A1/AS-17	Anti-ship missile	1997	585
Krasnopol-M	Guided shell 199		1100
9M119/AT-11 Sniper	Anti-tank missile	1998	800
Mineral/Band Stand	Surface surv. radar	2005	4
MR-90/Front Dome	Fire Control radar	2005	16

Moscow's decision to sell advanced conventional weapons systems to China results primarily from economic rather than strategic considerations. Despite the recent rise in national defense spending, the Russian government resists allocating substantial financial resources to restructuring the national defense industry. Citing the need to avoid repeating the Soviet mistake of competing in a ruinously expensive arms race, Putin and other Russian leaders have reaffirmed their commitment to hold annual military expenditures to sustainable levels. For this reason,

<sup>7-</sup>Stockholm International Peace Research Institute, Trade Register Table of Major Conventional Weapons Transfers from Russia to China generated July 19, 2009, http://www.sipri.org/.

they have encouraged Russian defense enterprises to sell their products abroad to earn additional revenue for reinvestment and to keep skilled workers from moving into civilian employment. Unlike energy—the other commercial sector where Russian exporters can compete effectively with foreign sellers - arms exports generate high-tech manufacturing employment as well as revenue. Government officials also appreciate that many Russian firms need increased investment capital to develop the type of advanced conventional weapons systems that have proven so effective for Western militaries in recent wars. International markets for Russian weapons systems, upgrades, maintenance, and spare parts help sustain production lines and workers that provide essential support for the Russian military.

Several considerations explain Chinese interest in acquiring Russian arms and military technology. Economic factors come into play insofar as, by purchasing foreign weapons, China avoids having to research, develop, and manufacture its own systems. Although China's indigenous arms industry has become more capable along with the rest of the economy, until recently Chinese defense enterprises still lagged behind their leading international counterparts in several key areas, such as advanced aviation and naval weapons. The 1989 Tiananmen Square incident led Western governments to prohibit their own companies from selling advanced military technologies to China, leaving Russia as the sole major remaining source of advanced foreign military technologies accessible to China. For its more sophisticated war planes, the PLA Air Force still relies on Russian-designed planes and engines. Although Russian government officials and defense enterprises preferred that China purchase finished systems weapons directly from Russian manufacturers that can be used

with the simple turn of a key, they proved amendable to meeting Chinese demands that many deals provide for some technology transfer to China, often through the licensed assembly of Russian weapons systems in Chinese factories.

Even so, China's increasingly sophisticated defense industry can now make many items that previously had to be acquired from Russian sources. As desired by PRC policy makers, the Chinese companies used the licensed production arrangements to transfer Russian technologies and manufacturing capabilities to China, allowing Chinese firms to produce substitutes. Chinese manufacturers are producing either more completely indigenous advanced weapons systems or more defense technologies, sub-systems, and other essential components that Chinese manufactures can insert directly into foreign-made systems. In January 2007, the Chinese military unveiled the Jian-10, a locally built fighterbomber that uses Chinese engines and Chinese missiles.8

Concerns about the quality of the weapons China has been purchasing from Russia have also encouraged the PRC to seek to enhance its indigenous production capabilities. According to the Russian press, the Chinese have complained about performance problems with some of the weapons they have received from Russia as well as inadequate post-sale servicing of the weapons. Chinese representatives have also objected to lengthy delays in receiving some purchases due to production difficulties on the Russian side. For example, China cancelled a 2005 contract, worth an estimated \$1.5 billion, to acquire 34 Ilyushin Il-76MD transport, 4 Il-78MK in-flight refueling tanker aircraft, and 88 D-30KP-2 engines,

<sup>&</sup>lt;sup>8</sup>-Peter Ford, "Fighter Jet Signals China's Military Advances," Christian Science Monitor, January 11, 2007, www.csmonitor.com/2007/0111/p07s01-woap.htm.

after the TAPO factory in Uzbekistan that had supplied the air frames during the Soviet era proved unable to replicate that contribution in the post-Soviet period due to the retirement of key personnel and the breakdown or obsolescence of essential equipment. <sup>9</sup> Russian negotiators subsequently proved unable to secure Chinese consent for a new contract with a later delivery date and a higher price. These quality and contract fulfillment problems apparently led the Chinese government to suspend meetings of the Russian-Chinese Intergovernmental Commission on Military-Technical Cooperation, which typically convenes twice a year. 10 The full commission failed to meet from 2005, when it held its 12<sup>th</sup> session in Sochi, until December 9-11, 2008, when defense ministers Serdyukov and Liang finally convened its 13<sup>th</sup> session in Beijing. 11

The combined effect of these developments has been to reduce the share of Russia's arms exports to China from 40% of all sales in 2006 to less than 20% in 2007. 12 Sales of major weapons systems decreased from 54% in 2006 to 28% in 2007. 13 China remained the single largest recipient of Russian arms thanks to the delivery of items purchased in earlier years (India's share was 20% in 2007, a significant increase from the 15% figure in 2006). In addition, no other foreign country has sold

<sup>9-</sup>Nikita Petrov, "Russian-Chinese Military Relations at a Low Point," RIA Novosti, May 27, 2008, http://en.rian.ru/analysis/20080527/108566309.html.

<sup>10-</sup>Alexandra Gritskova, Konstantin Lantratov, and Gennady Sysoev, "Kitay slozhil rossiyskoe oruzhie," Kommersant, May 7, 2007.

<sup>&</sup>lt;sup>11</sup>-Yu Bin, "China-Russia Relations: Embracing a Storm and Each Other?" Comparative Connections: A Quarterly E-Journal on East Asian Bilateral Relations, January 2009, http://www.csis.org/media/csis/pubs/0804qchina\_russia.

<sup>12-</sup>Marcin Kaczmarski, "Wen Jiabao's Visit to Moscow Fails to Resolve Problems in Russian-Chinese Economic Relations," CACI Analyst, November 14, 2007.

<sup>13-</sup>Paul Holtom, "The Beginning of the End for Deliveries of Russian Major Conventional Weapons to China," RIA Novosti, March 31, 2008, http://en.rian.ru/analysis/20080331/ 102440239.html.

Beijing sufficient weapons to challenge Russia's dominance of China's foreign defense purchases. Even so, the decline resulted in a 63% decrease in the value of Russian major weapons deliveries to China, which fell to their lowest level in a decade. The main reason for the decline was that, unlike in 2006, Russia did not deliver any warships or submarines to China in 2007. In any case, the decline contributed to a 29% reduction in Russia's overall export of major conventional weapons systems between 2006 and 2007.

Table 3. Russian Arms Sales to China since 1989<sup>15</sup>

(unit: million)

Year	USD	Year	USD
1990 (USSR)	81	2000	1,771
1991 (USSR)	133	2001	3,081
1992 (Russia)	1,150	2002	2,581
1993	1027	2003	2,031
1994	80	2004	2,828
1995	498	2005	3,232
1996	1,160	2006	3,535
1997	632	2007	1,298
1998	173	2008	1,109
1999	1,489		

Since 2005, China has not ordered additional Russian warships or warplanes or signed any new multibillion arms sale contracts. For instance, the People's Liberation Army Navy (PLAN) dashed Russian

<sup>14 -</sup> Ibid.

<sup>15-</sup>Stockholm International Peace Research Institute, Trend Indicator Values Table of Arms Transfers into China from 1989 to 2008 generated July 19, 2009, http://www.sipri.org.

hopes and declined to purchase additional Su-30MK2 after receiving the first 24 aircrafts in 2004. 16 Russian aspirations of selling China additional advanced air defense systems have also failed to materialize. 17 With the exception of Beijing's continuing purchases of Mil Mi-17 assault/transport helicopters, recent Russian arms transfers have simply involved fulfilling past contracts or limited purchases of upgrades and specialized technology (such as aircraft engines) where Russian manufactures retain a clear advantage. 18 In early 2009, for instance, China agreed to purchase over 100 engines for its J-10 fighter. 19 At their 13th session of the Russian- Chinese Commission on Military-Technical Cooperation, which met in Beijing in December 2008, the two governments decided they would attempt joint development of new military products, which would not necessarily result in additional Russian weapons sales to China.<sup>20</sup> Although he anticipated further purchases of transport airplanes, aircraft engines, and perhaps more air defense and naval weapons, Rosoboronexport General Director Isaikin predicts a further decrease in the share of Russian arms sold to China in coming years, reaching perhaps as low a level as 10 percent of the value

<sup>16-</sup>Konstantin Makienko, "Fast Transformation," Russia & CIS Observer, Vol. 4, No 23 (November 2008), http://www.ato.ru/rus/cis/archive/23-2008/airshow/airshowl/?sess\_ =uq7ne2nd0edsjfdi0t169qd6k6.

<sup>&</sup>lt;sup>17</sup>-Yu Bin, "China-Russia Relations: Medvedev's Ostpolitik and Sino-Russian Relations," Comparative Connections: A Quarterly E-Journal on East Asian Bilateral Relations, July 2008, http://www.csis.org/media/csis/pubs/0802qchina\_russia.pdf.

<sup>&</sup>lt;sup>18</sup>-Paul Holtom, "Outside View: Russia-China Row — Part 1," United Press International, April 7, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/ 04/07/outside\_view\_russia-china\_row\_--\_part\_1/3067. For additional details see SIPRI Arms Transfers Database, http://armstrade.sipri.org.

<sup>&</sup>lt;sup>19</sup>-"Russian Arms Exports to China May Drop Significantly," RIA Novosti, February 4, 2009, http://en.rian.ru/russia/20090204/119981492.html.

<sup>&</sup>lt;sup>20</sup>-Yu Bin, "China-Russia Relations: Embracing a Storm."

of all Russian military exports.<sup>21</sup> Some analysts suspect that the figure could shrink even further.<sup>22</sup>

The decline in Russian arms sales to China has already adversely affected the trade balance between Russia and the PRC. Partly as a result of the transformation. Russia's annual bilateral trade with China has shifted from a multibillion dollar surplus in 2006 to a multibillion dollar deficit in 2007.<sup>23</sup> Although Russian-Chinese trade reached a record \$56.8 billion in 2008, year-on-year Sino-Russian trade fell 42% in January. Russian exports declined an amazing 59% from the previous January and by 17% in the last quarter of 2008 alone.24 This trend marked a further deterioration in the trade balance against Russia. Before 2007, Russia racked up steady surpluses, thanks to large deliveries of energy, arms, and raw materials. That year, Russia increased its exports to China by 12.1% to \$19.67 billion, but Chinese sales to Russia surged by 79.9% to \$28.48 billion.<sup>25</sup> During the last three years, the terms of trade have been shifting markedly in China's favor due to a decline in Chinese purchase of weapons systems and other high-technology items and increasing Russian purchases of cheap Chinese cars, machinery tools, electronics, and other consumer goods.<sup>26</sup>

<sup>21</sup>-Vadim Soloviev, "Rosoboroneksport' ukreplyaet pozitsii," Nezavisimore voennoe obozrenie, February 6, 2009, http://nvo.ng.ru/armament/2009-02-06/1\_Rosoboroneksport.html.

<sup>&</sup>lt;sup>22</sup>-Michael Lelyveld, "China-Russia Oil Deal Masks Frictions," Radio Free Asia, May 18, 2009, http://www.rfa.org/english/energy\_watch/china-russia-oil-05182009150213.html.

<sup>&</sup>lt;sup>23</sup>-"Russia-China Trade up 44% to Record \$48 bln in 2007," *RIA Novosti*, January 17, 2008, http://en.rian.ru/russia/20080117/97148666.html.

<sup>24 - &</sup>quot;Russia-China Trade up 18% to \$56.8 bln in 2008," RIA Novosti, February 12, 2009, http://en.rian.ru/russia/20090212/120100347.html.

<sup>25</sup>\_ "China-Russia Bilateral Trade Hits \$48 bln in 2007," RIA Novosti, May 22, 2008, http://en.rian.ru/business/20080522/108086671.html.

<sup>&</sup>lt;sup>26</sup> - Ibid.

Another looming threat could be possible competition from European defense companies if the European Union (EU) were to lift its comprehensive arms embargo on China, which the EU imposed after the 1989 Tiananmen massacre. By agreeing now to sell more advanced weapons to China, Russian defense suppliers would help lock in future sales and raise the barrier to entry for potential EU competitors. European firms would find it difficult to match the low-price advantage of Russian defense enterprises but might prove more competitive in terms of quality. Beijing policy makers might also seek to reward European firms if the European Union decided to remove its arms embargo.

## Moscow's Choice

The ongoing improvement in the quality of China's national defense production, and the ever present threat of additional foreign competition confronts Russian officials with a difficult choice. Until now, the Russian government has refused to sell its most sophisticated weapons systems—such as long-range ballistic missiles or strategic bombers—to China for fear that such weapons could disrupt the balance of power in East Asia. The Russian government has also declined to sell China weapons – such as advanced land warfare weapons or tactical air support aircraft—that could assist the PLA in a ground war with Russia. Instead, Russia has transferred advanced weapons mostly for naval warfare and air defense. Moscow's restrain has meant that Russian arms sales to Beijing have not been sufficient by themselves to enable China to defeat the more technologically advanced militaries of Taiwan or Japan. Nevertheless, Chinese companies should soon be able to substitute their own

technologies for many of the expensive defense items the PLA has acquired from Russian suppliers in the past.

In order to restore its share of China's defense market, the Russian government could decide to sell these ground-force weapons, more advanced naval and air systems, and other previously "off-limit" products. Russian sources related that the PLA's General Armaments Department would like to purchase large quantities of Russian-made infantry flame-throwers self-propelled guns and artillery systems, multiplelaunch rocket systems, infantry fighting vehicles, armored personnel carriers, advanced attack and ship-borne helicopters, three-dimensional radars, naval surface-to-air missiles on vertical launchers, and electronic countermeasures systems, as well as engines and other components and technologies for manufacturing fourth-generation and fifth-generation aircraft.27

Certain Russian officials seem open to selling at least some of these weapons. On August 26, 2005, a "high-ranking source in the Russian Defense Ministry" told the Russian news agency Interfax-AVN that Russia had deliberately showcased their Tu-95MS and the Tu-22M3 at the bilateral August "Peace Mission 2005" exercises to entice Chinese buyers. Although these strategic bombers are older platforms (the Tu-160 is Russia's most advanced strategic bomber), they can launch long-range cruise missiles against air and ground targets, including U.S. aircraft carriers.<sup>28</sup> The sales motive was also evident in the Russian decision to

<sup>&</sup>lt;sup>27</sup>-Martin Sieff, "Defense Focus: Russia-China Arms Slump," *United Press International*, February 10, 2009, http://www.spacewar.com/reports/Defense\_Focus\_Russia-China\_ arms\_slump\_999.html.

<sup>28-</sup>Vladimir Ubran, "Posledniy rekord rossiyskogo oruzhiya," Moskovskie Novosti, June 17, 2005. The U.S. Department of Defense also concluded that the Russians might

leave the bombers that participated in the exercise, as well as other types of military aircraft, on display in China for several additional days. The policy of exploiting the opportunity to highlight a few advanced weapons systems to the Chinese during the exercise may have worked since Beijing placed a large order for one of the participating warplanes, the Il-78 tanker, a few weeks later.<sup>29</sup>

Moscow might also decide to offer Chinese defense firms some advanced weapons systems that Russian defense companies are beginning to produce. For example, Moscow could approve the sale of Russia's fourth-generation diesel-electric (Lada class) submarines, which would also increase China's military potential against the United States and its Pacific allies. They could also sell China their most advanced combat aircraft, such as the Su-33 and Su-35.30 More than 50 Russian firms displayed their wares at the Sixth China International Aviation and Aerospace Exhibition, held in October-November 2006 in Zhuhai in southern China.<sup>31</sup> At the November 2008 Zuhai Air Show, Chinese officials asked many questions about the Su-35, which began flying earlier in the year, but declined to agree to purchase any of them.<sup>32</sup> In the past, a senior Russian defense official, Alexander Denisov, said that Russia was

have been exploiting the exercise to show off advanced weapons systems to potential Chinese buyers. See Office of the Secretary of Defense, Military Power of the People's Republic of China 2006, Washington, DC: U.S. Department of Defense, 2006, p. 2.

<sup>&</sup>lt;sup>29</sup>-Yu Bin, "China-Russia Relations: The New World Order According to Moscow and Beijing," Comparative Connections, Vol. 7, No. 3, October 2005, p. 148.

<sup>&</sup>lt;sup>30</sup>-Alyson J. K. Bailes (ed.), SIPRI Yearbook 2006: Armaments, Disarmament and International Security (Oxford: Oxford University Press, 2006), p. 454.

<sup>&</sup>lt;sup>31</sup>-"China Intends to Buy Russia's Su-33," RIA Novosti, November 1, 2006, http://en.rian.ru/ russia/20061101/55289379.html.

<sup>32- &</sup>quot;China, Russia Vow to Step Up Military Ties," AFP, December 12, 2008, http://www. wsichina.org/morningchina/article.asp?id=3885.

even prepared to assist China in the design of an aircraft carrier. Denisov told the media, "Such a request would not contradict any international agreements or rules." The Russian media has carried reports of alleged Russian help to China regarding possible development of an aircraft carrier for the PLAN. For example, Rosoboronexport has considered offering China about 50 Su-33 Naval Flanker-D sea-based fighter aircraft. The estimated \$2.5 billion price tag of such a deal would represent the second largest arms sales agreement in Russian history, exceeded only by the \$3-billion agreement whereby Indian companies are assembling 140 Su-MKI fighters in India under a Russian license. 34

Thus far, however, the Russian government has still refused to authorize the sale of many advanced weapons since Russian officials continue to calculate that the potential costs from such transactions would likely exceed the benefits Moscow might accrue from the arms sales. First, the governments of Taiwan, the United States, and possibly Japan and other countries would criticize the sales as destabilizing. By improving China's air and maritime power projection capabilities, these Russian sales would increase the risk that Beijing policy makers might come to believe that they had a stronger military option against potential adversaries. Taiwan, Japan, Vietnam, and other countries that have territorial disputes with China might hold Moscow responsible for the increased risks of war.

In addition, a substantial factor weighing against a Russian decision to transfer even more advanced military systems is that

<sup>33-</sup>Cited in "China Intends to Buy Russia's Su-33 Fighters."

<sup>&</sup>lt;sup>34</sup>-"Russia Ready to Face Competition on China Arms Market — Official," *RIA Novosti*, November 1, 2006, http://en.rian.ru/russia/20061101/55290795.html.

Chinese engineers might learn enough from the sophisticated technology to further improve the quality of their indigenous production. Russian and other analysts cite past instances when Chinese technicians copied Russian weapons systems and, after making slight adjustments in their parameters (e.g., changing the caliber of an anti-missile system from 100 to 105 millimeters), sold them for export. 35 China had a long history of copying Soviet-era aircraft. China's J-6 and J-7 fighters were modeled after MiG-19 Farmer and MiG-21 Fishbed; its H-6 bomber after the Soviet Tu-16 Badger; and China's Y-5, Y-7 and Y-8 transport planes are based on the Soviet An-2 Colt, An-24 Coke and An-12 Cub, respectively. 36 The latest concern is that Chinese submarine designers are copying Soviet-era submarine technology, specifically incorporating insights from the Kilo-class diesel subs China purchased from Russia into the new Yuan-class submarine.37

Many Russian defense experts believe that the Chinese have violated the terms of previous technology transfer contracts by illicitly using Russian intellectual property to manufacture Chinese versions of Soviet and Russian weapons and sell them on third markets. These pirated and resold systems allegedly range from Kalashnikov assault rifles to Grad and Smerch multiple-launch rocket systems to

<sup>35-</sup>Chzhan Ikhun, "Russko-Kitayskogo torgovlya po oruzhiya razvivaetsya," Vremya Novostei, May 27, 2003. For other evidence that Chinese engineers have succeeded in copying Russian military technology for use in China's own defense industry see Alyson J. K. Bailes (ed.), SIPRI Yearbook 2005: Armaments, Disarmament and International Security (Oxford: Oxford University Press, 2005), pp. 423-424.

<sup>&</sup>lt;sup>36</sup>-"Chinese-Made Su-27s Will Squeeze Russia out of Third-Country Markets-Expert," RIA Novosti, February 21, 2008, http://en.rian.ru/analysis/20080221/99804804.html.

<sup>&</sup>lt;sup>37</sup>-Andrei Chang, "Analysis: Chinese Subs in S. China Sea," UPI, May 9, 2008, http:// www.upi.com/International Security/Industry/Analysis/2008/05/09/analysis chinese \_subs\_in\_s\_china\_sea/9552/.

self-propelled guns and tanks to most recently advanced fighter aircraft. <sup>38</sup> A minority of Russian analysts maintain that China's defense industry lags so far behind that of Russia that, even though Chinese firms have been able to copy—and in some cases improve upon—earlier Soviet weapons systems, Russian designers have since been able to manufacture more advanced weapons systems that sustain the large capability gap between the two countries. <sup>39</sup>

The Russian authorities have been careful in recent years to limit which arms they will offer to the PRC after the Chinese demonstrated great prowess in copying Soviet-era systems that the Russian government had earlier sold to Beijing. Like Western governments that frequently highlight their concerns about Chinese efforts to steal their military secrets and other valuable technologies, Russian counter-intelligence officials also worry about Chinese operations affecting their country. In December 2007, a Moscow court convicted Reshetin and the other four employers who had worked at the Tsniimash-Export company for attempting to transfer without authorization missile delivery technology to China's Precision Machinery Import-Export Corporation. In October 2008, a court also convicted a Russian couple accused of attempting to sell information to Chinese military intelligence about aircraft carriers. In February 2009, Russia's chief

<sup>&</sup>lt;sup>38</sup>-"China Ousting Russia from Global Aviation Market," *Nezavisimaya gazeta* cited in *RIA Novost*i, April 22, 2008, http://en.rian.ru/analysis/20080422/105653006.html.

<sup>39-&</sup>quot;China Copies Obsolete Russian Fighter," RIA Novosti, April 25, 2008, http://en.rian.ru/analysis/20080425/105928822.html.

<sup>&</sup>lt;sup>40</sup>-"Reshetin Sentenced to 11.5 Years for Passing Technology to China," *RIA Novosti*, December 3, 2007, http://en.rian.ru/russia/20071203/90747889.html.

<sup>41-</sup>Michael Lelyveld, "China-Russia Oil Deal Masks Frictions," Radio Free Asia, May 18, 2009, http://www.rfa.org/english/energy\_watch/china-russia-oil-05182009150213.html.

military prosecutor Sergei Fridinsky announced that his office had begun criminal proceedings against several senior Russian navy officials and Russian businessmen suspected of attempting to ship naval weapons bought on the black market through Tajikistan to China. The office characterized the attempted transaction as involving 30 anti-submarine missiles and 200 aviation bombs, which the accused hoped to sell for \$18 million.<sup>42</sup> These and related operations are usually managed in a manner to avoid a direct confrontation with Beijing. The Russian agencies typically only arrest the Russian nationals but not the Chinese citizens implicated. In turn, the Chinese government declined to comment publicly on the incident, though China's state- controlled media can publish comments by Chinese defense experts casting doubt on the allegations.

Some Russian sources now believe that Chinese companies may soon seek to mass produce and export on third-party markets a domestic copy of Russia's Su-27 Flanker fighter. In 2007, the Su-27, along with the Su-30 Flanker C, a variant of the Su-27, accounted for half the revenue of Rosoboronexport. 43 Since 1992, the Chinese government has purchased 76 complete Su-27SK fighters from Russia, while manufacturing another hundred of these third-generation planes under a production license purchased in 1995. The Chinese designate these domestic-made Su-27s as the "J-11." China has had to continue importing key Russian components for the indigenous Su-27/J-11 that were not included in

<sup>&</sup>lt;sup>42</sup>- "Russian Missiles Seized on way to China," *Reuters*, February 25, 2009, http://www. rferl.org/content/Russian\_Missiles\_Seized\_On\_Way\_To\_China/1499230.html.

<sup>43- &</sup>quot;Chinese-Made Su-27s Will Squeeze Russia out of Third-Country Markets — Expert," *RIA Novosti*, February 21, 2008, http://en.rian.ru/analysis/20080221/99804804.html.

the 1995 agreement, including the plane's avionics and AL-31F turbofan engine. 44 In 2004, however, the Chinese side informed Russia's Sukhoi aircraft company that it no longer desired to purchase the 100 additional assembly kits that had been envisaged in the 1995 contract. The professed reason was that the basic variant of the Su-27SK/J-11 fighter no longer met the Chinese Air Force's increasingly stringent performance requirements. However, Russian arms sellers believe the Chinese decided simply to take advantage of their improving domestic defense capabilities and substitute Chinese-made components for those previously imported from Russia. For example, China's new WS-10A Tai Hang turbofan engine has similar performance capabilities to the Russian AL-31F engine. 45 Since 2006, China has reportedly manufactured several prototypes of its own domestic version, the J-11B multi-function fighter. According to Chinese sources, 90 percent of the major subsystems fitted on the J-11B, including the 1474 serial radar and optical electronic systems, are manufactured in China. 46 The J-11 has been built at the Shenyang Aircraft Corporation (SAC), where the Su-27K had previously been assembled.

The expanding capabilities of the Chinese defense industry became evident in November 2006 when the Aviation Industries of China displayed a new air-launched supersonic cruise missile at the Sixth China International Aviation and Aerospace Exhibition held in Zhuhai. The

<sup>44-&</sup>quot;China Copies Su-27 Fighter, May Compete with Russia-Paper," RIA Novosti, February 21, 2008, http://en.rian.ru/russia/20080221/99765686.html.

<sup>45 -</sup> Ibid.

<sup>46-</sup>Andrei Chang, "Analysis: China immitates Su-27SK," United Press International, February 25, 2008, http://www.upi.com/International Security/Industry/Analysis/ 2008/02/25/analysis\_china\_imitates\_su-27sk/2777.

ramjet-powered missile could allow the PLAN to attack U.S. aircraft carriers and other ships within a 400 km radius. China has until now relied on Russian imports for its anti-ship cruise missiles such as the SS-N-22 "Sunburn" and SS-N-27B "Sizzler." Russian defense firms already have confronted increasingly unwelcome Chinese competition in third-country arms markets, such as in Egypt and Myanmar. In some developing countries that previously bought predominantly Soviet arms, Russian firms have yielded much of the market to lower-cost Chinese suppliers.

According to the Iranian news agency PressTV, Iran's leaders, annoyed at Moscow's continued procrastination, are ready to purchase an air defense system, the HongQi-9, from China that "borrows" heavily from the S-300 technology that China purchased from Russia in the 1990s.48 In November 2008, the China Precision Machinery Import- Export Corporation (CASIC) placed the HQ-9 surface to air missile on the export market as the "FD-2000." The HQ-9/FD-2000 reportedly uses elements of the S-300's solid rocket, aerodynamic layout, gas-dynamic spoilers, launch technologies, and search and guidance systems. 49 Although its reported range and effectiveness is lower than that of the most sophisticated variants of the S-300, the HQ-9/FD-2000 would still represent a major improvement over the Russian-made Tor-M1 mid-air defense systems Iran has purchased in

<sup>&</sup>lt;sup>47</sup>-Joseph E. Lin, "China Unveils New Supersonic Cruise Missile," China Brief, Vol. 6, No. 24, December 6, 2006, p. 2.

<sup>48-&</sup>quot;Russia 'Losing to China on Iran S-300 Quest," PressTV, May 9, 2009, http://www. presstv.ir/detail.aspx?id=94183.

<sup>&</sup>lt;sup>49</sup>- "China Gearing up to Export HQ-9 Anti-Air Missiles," Defense Industry Daily, March 8, 2009, http://www.defenseindustrydaily.com/China-Gearing-up-to-Export-HQ-9-Anti-Air-Missiles-05319/.

the past.<sup>50</sup> One wonders how long the Russian leadership will continue to abstain from selling S-300s to Iran now that they risk losing the coveted Iranian arms market to China. If Chinese companies can develop more advanced indigenous weapons systems for export, China could become an even more formidable competitor.

Russian officials faced this dilemma in 2006 and 2007, when their Chinese counterparts requested that Moscow grant them a license to deliver at least 150 FC-1 Fierce Dragon fighter planes, equipped with Russian RD-93 engines, to Pakistan. Chinese and Pakistani firms are jointly developing the FC-1, which is known as the JF-17 Thunder fighter in Pakistan. Chinese manufacturers hope that foreign sales of the FC-1 (a single-engine delta-winged fighter manufactured primarily at the Chengdu Aeronautical Complex) will help transform China into a leading seller of advanced combat aircraft to developing countries, many of which currently purchase Russian military aircraft. Beijing had signed an end-user agreement that requires Russian government approval before China can re-export the RD-93 to a third country. On the one hand, refusing the Chinese re-export request would have made Beijing more reluctant to purchase Russian technology in the future. On the other hand, granting the re-export license in the case of the FC-1 would-besides antagonizing India, Russia's other leading arms purchaser — make it harder to deny similar Chinese requests to sell the planes to additional countries.<sup>51</sup> According to the Russian media, in

<sup>50</sup>-Andrei Chang, "China Offers HQ-9 SAM for Export," *UPI*, March 6, 2009, http://www.upiasia.com/Security/2009/03/06/china\_offers\_hq-9\_sam\_for\_export/6690/.

<sup>51-</sup>Ivan Safronov, Alexandra Gritskova, and Knstantin Lantratov, "Rossiya Vybiraet mezhdu \$1.5 mlrd I \$2 mlrd," Kommersant, October 30, 2006; and Mure Dickie, Farhan Bokhari, and Arkady Ostrovsky, "China Confident Russia Will Allow Jet

April 2007, Putin personally gave China permission to re-export the Russian RD-93 engines to Pakistan as a one-time arrangement. The Ministry of Defense, Rosoboronexport, and other key actors in the Russian military-industrial complex supported granting the waiver in order to ensure that China would buy the engines. Under the terms of a 2005 contract, China will pay Russian suppliers \$238 million for the purchase of 100 RD-93 engines, as well as the associated spare parts and maintenance. China considered purchasing as many as 1,000 engines if the Russian suppliers upgrade their capabilities.<sup>52</sup> The Pakistani Air Force received its first two JF-17 aircrafts in December 2007.53 The following month, the plane entered into mass assembly, with a plant in northwest Pakistan combining parts from China and Pakistan with the Russian engines.54

Yet, fears about Chinese intellectual piracy reportedly led the Russian government to decide against providing the Su-33 combat aircraft for use on possible Chinese aircraft carriers. According to the Russian press, fears that the Chinese would buy a few systems in order to reverse engineer or otherwise copy them led to a collapse of the Russian-Chinese negotiations regarding a possible deal.<sup>55</sup> The Chinese reportedly asked to purchase only two Su-33 planes for a "trial" before

Sale," Financial Times, November 9, 2006.

<sup>52-</sup>Leksandra Greitsova and Elena Kiseleva, "Kitayskiye istrebitli doletyat do Pakistana" [Chinese Fighter Jets to Reach Pakistan], Kommersant, April 26, 2007.

<sup>53-&</sup>quot;Co-Production of Pak-China Thunder Jet JF-17 Begins in Pakistan," RTI News, January 22, 2008, www.freerepublic.com/focus/f-news/1957516/posts.

<sup>54-&</sup>quot;Pakistan Starts Mass Production of JF-17 Fighters-National TV," RIA Novosti, January 22, 2008, http://en.rian.ru/world/20080122/97523937.html.

<sup>55- &</sup>quot;Russia Shows Concern over Chinese Weapons Piracy," RIA Novosti, March 13, 2009, http://en.rian.ru/analysis/20090313/120554173.html.

considering whether to buy merely a dozen more.<sup>56</sup> Russian defense industry representatives calculated they needed to manufacture at least 24 planes to recover their fixed production costs.<sup>57</sup> Observers speculate that one reason Russia decided in October 2007 to jointly develop and produce a fifth-generation combat aircraft with India rather than China was fears that China might misappropriate Russian intellectual property.<sup>58</sup> At the 13<sup>th</sup> session of the Russian-Chinese Commission on Military-Technical Cooperation, which met in Beijing from December 9-11, 2008, the two governments announced that they had agreed to negotiate a new bilateral intellectual property agreement, but whether it will work sufficiently well to assuage Russian concerns about Chinese piracy remains to be seen.<sup>59</sup>

An even more worrisome possibility would be China's employment of Russian defense technologies in a future war with Taiwan, India, the United States, or even Russia itself. Since 1993, Russia has provided China with 20 battalions of surface to air missiles, including S-300 SAMs, S-300PMUs, S-300PMU1s, and most recently S-300PMU2s. These systems have become an essential component of China's air defense network, including in possible cross-Strait operations against Taiwan and its American military allies. 60 Some Russian strategists

<sup>56-&</sup>quot;Russian-Chinese Su-33 Fighter Deal Collapse," *RIA Novosti*, March 10, 2009, http://en.rian.ru/russia/20090310/120493194.html.

<sup>57-&</sup>quot;Do It Yourself: Russia Blocks China's Copycat Efforts," Russia Today, March 9, 2009, http://www.russiatoday.ru/Top\_News/2009-03-09/Do\_it\_yourself\_\_Russia\_blocks \_China\_s\_copycat\_efforts.html.

<sup>58-</sup>Paul Holtom, "Outside View: Russia-China Row — Part 2," *United Press International*, April 9, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/04/09/outside\_view\_russia-china\_row\_--\_part\_2/7841.

<sup>59-</sup>Yu Bin, "China-Russia Relations: Embracing a Storm."

<sup>&</sup>lt;sup>60</sup>-Andrei Chang, "Analysis: China to Get SAMs from Russia," *United Press International*,

anticipate that China's peaceful acquisition or military conquest of Taiwan would allow Beijing to redirect any expansionist ambitions against Russia's Central Asian allies or the under-populated Russian Far East. 61 Although a possible Sino-Russian military conflict presently seems remote, some of the weapons systems China is acquiring from Russia could remain operational for decades. During the Sino-Soviet border clashes of the late 1960s, the Chinese forces employed Sovietsupplied weapons against their Soviet units. Although the predominant sentiment among Russian defense experts is that China is either a potential military ally of Russia or will lack the ability to rival the Russian armed forces for the indefinite future, a few Russian military experts worry that Beijing might again present "a major threat" to Russia. 62 Former Russian General and Yeltsin's National Security Adviser Alexsandr Lebed once remarked that, "our brilliant minds in the military are selling them aircraft. These aircrafts will one day bring bombs to our heads."63

Finally, China's high demand for Russian arms from other countries as well as Russia's own defense ministry has reduced the need for Moscow to take risks in selling more powerful weapons to China. Although some Russian manufacturers still rely heavily on Chinese defense contracts,

May 2, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/ 05/02/analysis china to get sams from russia/1514.

<sup>&</sup>lt;sup>61</sup>-Yury E. Fedorov, 'Boffins' and 'Buffoons': Different Strains of Thought in Russia's Strategic Thinking (London: Royal Institute of International Affairs, March 2006), p. 3, http:// www.cfr.org/content/publications/attachments/BP0306russia.pdf.

<sup>62-</sup>Dmitri Trenin, "Russia's Threat Perception and Strategic Posture" in Russian Security Strategy under Putin: U.S. and Russian Perspectives (Carlyle: Strategic Studies Institute, U.S. Army War College, 2007), p. 47.

<sup>63-</sup>Herman Pirchner, Jr. "The Uncertain Future: Sino-Russian Relations in the Twenty-First Century," Demokratizatsiya, Vol. 16, No 4 (Fall 2008), p. 313.

many others have received orders from other countries. In recent years, Russia's annual arms sales have increased by about \$800 million annually despite the reduction in Chinese purchases. The Russian government and its defense companies have negotiated major arms sales deals with Algeria, India, Indonesia, Venezuela, and other countries. Rosobornexport claims to have already signed some \$26.5 billion worth of contracts that it can fulfill in coming years, a much larger backlog than during the 1990s and early 2000s when sales to China were seen as essential for sustaining Russia's ailing defense industry. 64 In February 2009, Isaikin professed unconcern about the declining share of Russian military sales to China since Rosobornexport's sales volumes to the rest of the world were growing. Isaikin added that China would likely continue to buy some Russian weapons systems while working with Russia to co-develop high-technology dual-use products having both civilian and military application. 65 The owners of the large numbers of weapons systems that China has acquired from Russia during the past decade and a half will presumably also need to purchase spare parts and upgrades for these systems.

The favorable situation might change yet again. Although Russian arms sales remain healthy, the global recession could lead foreign governments to reduce their purchases of Russian weapons in the future. The recent decline in world prices for Russia's oil and gas exports has already sharply decreased the Russian government's energy export

<sup>64-</sup>Vadim Soloviev, "Rosoboroneksport' ukreplyaet pozitsii," Nezavisimore voennoe obozrenie, February 6, 2009, http://nvo.ng.ru/armament/2009-02-06/1\_Rosoborone ksport.html.

<sup>65 &</sup>lt;sub>–</sub> Ibid.

revenue and induced Russian negotiators to make additional concessions to secure Chinese purchases of additional Russian energy supplies. The Russian military might need to scale back its own weapons purchases. These conditions could at some point induce Russian officials to acquiesce in the sale of more advanced weapons systems to China despite the associated risks. If this occurs, then the PRC is likely to consolidate its position as North Korea's main weapons supplier, further weakening Russian influence in Pyongyang.

■ Article Received: 8/24 ■ Reviewed: 12/7 ■ Revised: 12/11 ■ Accepted: 12/14

## References

- Bailes, Alyson J. K, ed. SIPRI Yearbook 2005: Armaments, Disarmament and International Security. Oxford: Oxford University Press. 2005.
- Bailes, Alyson J. K, ed. SIPRI Yearbook 2006: Armaments, Disarmament and International Security. Oxford: Oxford University Press. 2006.
- Bin, Yu. "China-Russia Relations: Embracing a Storm and Each Other?" Comparative Connections: A Quarterly E-Journal on East Asian Bilateral Relations. January 2009, http://www.csis.org/media/csis/pubs/0804 qchina\_ russia.
- Bin, Yu. "China-Russia Relations: Medvedev's Ostpolitik and Sino-Russian Relations." *Comparative Connections: A Quarterly E-Journal on East Asian Bilateral Relations*. July 2008, http://www.csis.org/media/csis/pubs/0802 qchina\_russia.pdf.
- Bin, Yu. "China-Russia Relations: The New World Order According to Moscow and Beijing." *Comparative Connections: A Quarterly E-Journal on East Asian Bilateral Relations*, Vol. 7, No. 3. October 2005.

- Chang, Andrei. "Analysis: China Immitates Su-27SK." *UPI*. February 25, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/0 2/25/analysis\_china\_imitates\_su-27sk/2777.
- Chang, Andrei. "Analysis: China to Get SAMs from Russia." *UPI*. May 2, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/0 5/02/analysis\_china\_to\_get\_sams\_from\_russia/1514.
- Chang, Andrei. "Analysis: Chinese Subs in S. China Sea." *UPI*. May 9, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/0 5/09/analysis\_chinese\_subs\_in\_s\_china\_sea/9552/.
- Chang, Andrei. "China Offers HQ-9 SAM for Export." *UPI*. March 6, 2009, http://www.upiasia.com/Security/2009/03/06/china\_offers\_hq-9\_sam \_for\_export/6690/.
- "China Copies Obsolete Russian Fighter." *RIA Novosti*. April 25, 2008, http://en.rian.ru/analysis/20080425/105928822.html.
- "China Copies Su-27 Fighter, May Compete with Russia—Paper." *RIA Novosti*. February 21, 2008, http://en.rian.ru/russia/20080221/99765686.html.
- "China Gearing up to Export HQ-9 Anti-Air Missiles." *Defense Industry Daily*. March 8, 2009, http://www.defenseindustrydaily.com/China-Gearing-up-to-Export-HQ-9-Anti-Air-Missiles-05319/.
- "China Intends to Buy Russia's Su-33 Fighters." *RIA Novosti*. November 1, 2006, http://en.rian.ru/russia/20061101/55289379.html.
- "Chinese-Made Su-27s Will Squeeze Russia out of Third-Country Markets-Expert." *RIA Novosti*. February 21, 2008, http://en.rian.ru/analysis/ 20080221/99804804.html.
- "China-Russia Bilateral Trade Hits \$48 bln in 2007." *RIA Novosti*. May 22, 2008, http://en.rian.ru/business/20080522/108086671.html.
- "China, Russia Sign Five-Point Joint Statement." *Xinhua*. June 17, 2009, http://news.xinhuanet.com/english/2009-06/18/content\_11558133.htm.
- "China, Russia Vow to Step Up Military Ties." *AFP*. December 12, 2008, http://www.wsichina.org/morningchina/article.asp?id=3885.

- "Co-Production of Pak-China Thunder Jet JF-17 Begins in Pakistan." RTI News. January 22, 2008, www.freerepublic.com/focus/f-news/1957516/posts.
- Dickie, Mure, Farhan Bokhari, and Arkady Ostrovsky. "China Confident Russia Will Allow Jet Sale." Financial Times. November 9, 2006.
- "Do It Yourself: Russia Blocks China's Copycat Efforts." Russia Today. March 9, 2009, http://www.russiatoday.ru/Top News/2009-03-09/Do it yourself Russia\_blocks\_China\_s\_copycat\_efforts.html.
- Fedorov, Yury E. 'Boffins' and 'Buffoons': Different Strains of Thought in Russia's Strategic Thinking. London: Royal Institute of International Affairs. March 2006, http://www.cfr.org/content/publications/attachments/BP 0306russia.pdf.
- Ford, Peter. "Fighter Jet Signals China's Military Advances." Christian Science Monitor. January 11, 2007, www.csmonitor.com/2007/0111/p07s01woap.htm.
- "Gendirektor 'Rosoboroneksporta' Anatoliy Isaikin: Nesmotrya na krizis, eksport nashego oruzhiya stavit rekordy." Rossiiskaya Gazeta. April 10, 2009, http://www.rg.ru/2009/04/10/orujie.html.
- Greitsova, Leksandra and Elena Kiseleva. "Kitayskiye istrebitli doletyat do Pakistana" [Chinese Fighter Jets to Reach Pakistan]. Kommersant. April 26, 2007.
- Grimmett, Richard F. Conventional Arms Transfers to Developing Nations, 1998-2005. Washington, DC: Congressional Research Service. October 23, 2006, http://fas.org/sgp/crs/weapons/RL33696.pdf.
- Gritskova, Alexandra, Konstantin Lantratov, and Gennady Sysoev. "Kitay slozhil rossiyskoe oruzhie" [China Sets Aside Russian Arms]. Kommersant. May 7, 2007.
- Holtom, Paul. "Outside View: Russia-China Row—Part 1." UPI. April 7, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/0 4/07/outside\_view\_russia-china\_row\_--\_part\_1/3067.
- Holtom, Paul. "Outside View: Russia-China Row—Part 2." UPI. April 9, 2008, http://www.upi.com/International\_Security/Industry/Analysis/2008/0

- 4/09/outside\_view\_russia-china\_row\_--\_part\_2/7841.
- Holtom, Paul. "The Beginning of the End for Deliveries of Russian Major Conventional Weapons to China." *RIA Novosti*. March 31, 2008, http://en.rian.ru/analysis/20080331/102440239.html.
- Ikhun, Chzhan. "Russko-Kitayskogo torgovlya po oruzhiya razvivaetsya." Vremya Novostei. May 27, 2003.
- Kaczmarski, Marcin. "Wen Jiabao's Visit to Moscow Fails to Resolve Problems in Russian-Chinese Economic Relations." CACI Analyst. November 14, 2007.
- Lague, David. "Russia and China Rethink Arms Deals." *New York Times*. March 2, 2008, http://www.nytimes.com/2008/03/02/world/asia/02iht-arms.1. 10614237.html.
- Lelyveld, Michael. "China-Russia Oil Deal Masks Frictions." Radio Free Asia. May 18, 2009, http://www.rfa.org/english/energy\_watch/china-russia-oil-05182009150213.html.
- Lin, Joseph E. "China Unveils New Supersonic Cruise Missile." *China Brief*, Vol. 6. No. 24. December 6, 2006.
- Makienko, Konstantin. "Fast Transformation." *Russia & CIS Observer*, Vol. 4, No 23. November 2008, http://www.ato.ru/rus/cis/archive/23-2008/airshow/airshowl/?sess\_=uq7ne2nd0edsjfdi0t169qd6k6.
- "Pakistan Starts Mass Production of JF-17 Fighters National TV." *RIA Novosti.* January 22, 2008, http://en.rian.ru/world/20080122/97523937.html.
- Petrov, Nikita. "Russian-Chinese Military Relations at a Low Point." *RIA Novosti.* May 27, 2008, http://en.rian.ru/analysis/20080527/108566309.html.
- Pirchner Jr., Herman. "The Uncertain Future: Sino-Russian Relations in the Twenty-First Century." *Demokratizatsiya*, Vol. 16, No 4. Fall 2008.
- "Reshetin Sentenced to 11.5 Years for Passing Technology to China." *RIA Novosti*. December 3, 2007, http://en.rian.ru/russia/20071203/90747889.html.
- "Russian Arms Exports to China May Drop Significantly." *RIA Novosti*. February 4, 2009, http://en.rian.ru/russia/20090204/119981492.html.

- "Russia-China Trade up 44% to Record \$48 bln in 2007." RIA Novosti. January 17, 2008, http://en.rian.ru/russia/20080117/97148666.html.
- "Russia-China Trade up 18% to \$56.8 bln in 2008." RIA Novosti. February 12. 2009, http://en.rian.ru/russia/20090212/120100347.html.
- "Russian-Chinese Su-33 Fighter Deal Collapse." RIA Novosti. March 10, 2009, http://en.rian.ru/russia/20090310/120493194.html.
- "Russia 'Losing to China on Iran S-300 Quest." PressTV. May 9, 2009, http:// www.presstv.ir/detail.aspx?id=94183.
- "Russian Missiles Seized on way to China." Reuters. February 25, 2009, http:// www.rferl.org/content/Russian\_Missiles\_Seized\_On\_Way\_To\_China/ 1499230.html.
- "Russia Ready to Face Competition on China Arms Market—Official." RIA Novosti. November 1, 2006, http://en.rian.ru/russia/20061101/5529 0795 html
- "Russia Shows Concern over Chinese Weapons Piracy." RIA Novosti. March 13, 2009, http://en.rian.ru/analysis/20090313/120554173.html.
- Safronov, Ivan, Alexandra Gritskova, and Knstantin Lantratov. "Rossiya Vybiraet mezhdu \$1.5 mlrd I \$2 mlrd." Kommersant. October 30, 2006.
- Sieff, Martin. "Defense Focus: Russia-China Arms Slump." UPI. February 10, 2009, http://www.spacewar.com/reports/Defense\_Focus\_Russia-China\_ arms slump 999.html.
- Soloviev, Vadim. "Rosoboroneksport' ukreplyaet pozitsii." Nezavisimore voennoe obozrenie. February 6, 2009, http://nvo.ng.ru/armament/2009-02-06/1\_ Rosoboroneksport.html.
- Stockholm International Peace Research Institute. Trade Register Table of Major Conventional Weapons Transfers from Russia to China generated July 19, 2009, http://www.sipri.org/.
- Stockholm International Peace Research Institute. Trend Indicator Values Table of Arms Transfers into China from 1989 to 2008 generated July 19, 2009, http://www.sipri.org.

- Trenin, Dmitri. "Russia's Threat Perception and Strategic Posture." In *Russian Security Strategy under Putin: U.S. and Russian Perspectives*. Carlyle: Strategic Studies Institute, U.S. Army War College, 2007.
- Ubran, Vladimir. "Posledniy rekord rossiyskogo oruzhiya." *Moskovskie Novosti.*June 17, 2005.