Dispatch No. 6 • April 2016 The Online Trade of Light Weapons in Libya



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Introduction

While it was in power the Qaddafi regime tightly regulated the Libyan domestic arms trade, and local black market sales were virtually unheard of. Supplies were constrained as well—international sanctions prohibited the legal importation of arms into Libya from 1992 to 2003.¹ Even when sanctions were lifted in September 2003 and international arms exports began to flow again (supplementing the Qaddafi regime's already massive government arsenal), the domestic arms trade was stagnant (Jenzen-Jones and McCollum, forthcoming).

The Libyan revolution deposed the Qaddafi regime in 2011 and with it brought to an end the Libyan state's regulation of the arms trade. Military stockpiles were raided, and small arms and light weapons made their way into the hands of non-state armed groups and private sellers.

From a virtually non-existent domestic market, the revolution and its aftermath paved the way for a large illicit arms trade to emerge. Many of the players in this new market began to use new technologies to hawk their wares. Online sales via social media platforms are one of the tools currently being used for this purpose.

This Dispatch examines the trade in light weapons (see Box 1) in the new online marketplace. Building on research undertaken for a forthcoming Small Arms Survey Working Paper, the Dispatch relied on a database developed by Armament Research Services (ARES) to examine the online arms trade in Libya. The database contains information about both groups and individual traders active on popular social media and communication platforms. Much of this information was exchanged among private or hidden groups and was thus inaccessible to the public at large. Information on 97 trades or sales over an 18-month period (September 2014–March 2016) was used to examine the sellers and the types of light weapons being offered for sale.²

Box 1 Light weapons

There is no universally accepted definition of a 'small arm' or a 'light weapon'. The Small Arms Survey largely adopts the proposal put forward by the 1997 UN Panel of Governmental Experts (UNGA, 1997), which considers portability a defining characteristic.

The UN Panel lists the following as light weapons: heavy machine guns; handheld under-barrel and mounted grenade launchers; portable anti-aircraft guns; portable anti-tank guns; recoilless rifles; portable launchers of anti-tank missile and rocket systems; portable launchers of anti-aircraft missile systems (MANPADS); and mortars of calibres of less than 100 mm.

To this list, the Survey has added singlerail-launched rockets and 120 mm mortars as long as they can be transported and operated as intended by a light vehicle.

Source: Small Arms Survey (n.d.)

Key findings include:

- Large and important population centres remain the most active areas for the illicit online arms trade.
- The availability of light weapons in online markets may reflect the needs of Libya's non-state armed groups: evidence suggests that some purchasers and sellers have ties to armed groups and their purchases are related to the needs of these groups, while sales may be designed to dispose of unwanted, unusable, or obsolete arms from these groups.
- Light weapons are more expensive than small arms, which may indicate that the market for light weapons is limited to well-financed armed groups rather than individuals.

- The relative absence of certain light weapons (most notably mortars and crew-served recoilless guns) from online arms-trading platforms is noteworthy, given the substantial numbers of such weapons possessed by both the Qaddafi regime and rebel forces during the 2011 revolution.
- Most of the light weapons for sale originate from pre-1992 imports by the Qaddafi regime, although some systems were imported during the 2003-2011 period, and one possibly after 2011.
- The majority of light weapons for which the country of origin can be conclusively identified are from the former Warsaw Pact region, including the former Soviet Union and the Russian Federation.

The Dispatch begins by exploring the regional distribution of online sales and noting the availability of various types of weapons. It then undertakes a detailed examination of the light weapons offered for sale, including their specific types and designations, and their countries of origin. The Dispatch includes numerous photos of the weapons offered for sale, as well as a list of abbreviations and acronyms. It concludes with a policy-relevant analysis of the current state of the Libyan online light weapons market and possible future developments. The Dispatch should be considered to supplement the forthcoming Working Paper, which will appear later in 2016 (Jenzen-Jones and McCollum, forthcoming).

An overview of the illicit online arms trade in Libya

Beginnings

It is difficult to precisely identify the beginnings of the illicit online arms trade in Libya. Widespread media reports of online sites and services being employed for illicit arms sales emerged in mid-to-late 2013. Researchers started examining the issue in 2014, with the media also providing continuing, if sporadic, coverage.

According to confidential sources,³ increased access to Internet services served as a primary catalyst for the emergence of online weapons sales. Before the revolution the Qaddafi regime heavily restricted private users' Internet access. After Qaddafi's fall these restrictions disappeared and arms traders and individuals quickly realized the viability of social media for expanding their access to potential customers (Jenzen-Jones and McCo-llum, forthcoming).

Locations

Key population centres remain the most active areas for the black market trade. Of the eight social media groups from which data was collected, six focused on sales in Tripoli and the surrounding areas. Another group focused on Benghazi, while the final group focused on Sabratha. Most sellers whose location details were available were based in these three urban areas, with others in Zawia and Sabha.

The marketplace in operation

Participation in the market is difficult to summarize. The majority of individual sellers are 20–30 years old and come from a diverse range of backgrounds and professions (Jenzen-Jones and McCollum, forthcoming). Some of the most active market participants are known or suspected to have ties to armed groups.⁴ These individuals may be acquiring weapons and ammunition for armed groups' arsenals or for their personal use during the operations of armed groups in which they take part. Several accounts documented by the authors that are believed to be associated with armed groups frequently advertise for 'wanted' weapons or ammunition (Jenzen-Jones and McCollum, forthcoming). Many of these posts seek ammunition for light weapons, including 12.7 x 108 mm and 14.5 x 114 mm cartridges, projectiles for RPG-7-type recoilless weapons, and missiles for anti-tank guided weapons. Similarly, private sellers and markets may also provide an outlet for members of armed groups to dispose of unwanted or unusable arms.⁵

Light weapons constitute the minority of listings among the social media groups studied for this Dispatch.

These weapons tend to be significantly more expensive than small arms, which may place them out of reach for most 'regular' buyers. Indeed, the cost and uses of light weapons likely limit the buyers to individuals affiliated with organized armed groups. The low trading volumes are likely influenced by armed groups' reluctance to part with light weapons during periods of instability. The origins of the light weapons offered for sale are largely unknown, although the majority are likely to have originated in Qaddafi-era stockpiles.

Trends

There are significantly fewer sellers of light weapons than of small arms, with a correspondingly limited demand. Demand appears to have spiked in 2015 (60 per cent of sales documented) and remains in 2016, with 28 per cent of items in the dataset posted in the first three months of 2016. These figures appear to confirm an increasing appreciation of the benefits of online platforms by traders dealing in light weapons in particular, and in arms and munitions more broadly.

The majority of light weapons in the database for which the country of origin can be conclusively identified (76) came from the former Soviet Union and the Russian Federation (73 per cent). Belgium (8 per cent) and China (6 per cent) manufactured significant numbers of the weapons offered for sale. It should be noted, however, that the origin of Chinese and Belgian weapons could be conclusively identified from the imagery available more often than some other weapons. It is likely that the majority of the weapons of unknown provenance in the database (21) originated in former Warsaw Pact countries.⁶

Most of the light weapons in the database are attributable to the Qaddafi regime's pre-1992 imports. The relative absence of certain light weapons from the database (most notably mortars and crew-served recoilless guns) is noteworthy in light of the substantial numbers of such weapons both possessed by the Qaddafi regime and used by rebel forces during the 2011 conflict. And although most light weapons can be traced to the pre-1992 period, there is evidence of items that were delivered either during the 'inter-sanction' period (September 2003–February 2011) or after the revolution. This includes one item possibly exported to Libya following the revolution and delivered to the internationally recognized Government of Libya under an exemption to the UN sanctions regime.

The majority of items posted to the social media groups tracked in the database have no asking price. Rather, the items receive either private or public offers, which sometimes results in bidding contests. And while some sellers set asking prices, others do not offer a 'suggested price' until after bidding has begun. According to confidential sources, much of the trade takes place via private messaging or telephone conversations. Light weapons in particular appear to receive fewer public offers than small arms and ammunition.

Bearing these limitations in mind, the database does offer some indication of pricing. Heavy machine guns, for example, garnered an average offer of LYD 8,125 (USD 5,900).⁷ Anti-aircraft systems, such as the ZPU-2, received offers of up to LYD 85,000 (USD 62,000).⁸ The average offer made on recoilless weapons was LYD 5,417 (USD 4,000), while the average offer for rocket launchers was LYD 9,000 (USD 6,500).

Types of light weapons traded online in Libya

Heavy machine guns

Heavy machine guns (HMGs) are crew-served machine guns chambered for a cartridge of more than 8 mm but less than 20 mm in calibre (Ferguson et al., 2015). Six DShKM- and eleven KPV-type HMGs constituted the bulk of the systems documented, and represent two of the most common Eastern Bloc HMGs, chambered for 12.7 x 108 mm and 14.5 x 114 mm cartridges, respectively. While some were produced in the Soviet Union, the provenance of other examples could not be conclusively determined. Both types were widely produced and could have entered Libya via a variety of routes. Both were in service with the Libyan armed forces under Qaddafi and are currently used by all major factions in Libya. Several of the KPV-type examples were HMGs mounted in ZPU anti-aircraft mounts of one, two, or four weapons (see Photo 1). These weapons have seen widespread use with various armed groups in Libya, and demand for ammunition for these systems in particular was linked to buyers with confirmed or suspected affiliation to armed groups.

One Belgian FN Herstal Browning M2-type HMG chambered for the $12.7 \times 99 \text{ mm}$ (.50 BMG) cartridge was also identified, as was a single NSV-type HMG chambered for the $12.7 \times 108 \text{ mm}$ cartridge. The former likely forms part of an authorized export to Libya, although the model is also widely available in the region. The NSV is also widespread in the region, and both models were documented in the hands of both the Qaddafi regime and rebel forces during the 2011 civil war.

Photo 1 A ZPU-2 mounted on the back of a light vehicle advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

Shoulder-fired recoilless weapons and rocket launchers

The dataset used for this research contains a range of shoulder-fired recoilless weapons and rocket launchers. These include single-shot, disposable weapons such as the Czechoslovakian RPG-75 and Russian RShG systems, as well as reloadable systems such as RPG-7-type rocket-assisted recoilless weapons. The RPG-7 system was the most common, with 16 examples in the dataset. Chinese, Russian, and Bulgarian systems were conclusively identified among them. Those with visible dates of manufacture were both Bulgarian, and dated from 1979 and 1987. The available ammunition was almost exclusively restricted to variants of the model PG-7 round, although one PG-7M round was observed.

Photo 2 A Yugoslavian M 57 recoilless weapon advertised in a Libyan social media group used to trade arms.



Photo 3 The markings on a Russian RShG-2 thermobaric rocket launcher advertised in a Libyan social media group used to trade arms.

Photo 4 A WPF89-2 advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

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The dataset contains one Yugoslavian M 57—a recoilless weapon firing an over-calibre high-explosive anti-tank (HEAT) projectile to a maximum range of 1,200 m (see Photo 2). The standard munition offers armour penetration of approximately 270 mm rolled homogeneous armourer equivalency (RHAe). The date of import for these systems is not known; however, a range of other Yugoslavian weapons—including man-portable air defence systems (MANPADS), anti-tank guided weapons (ATGWs), and mortar projectiles—that were documented in Libya date from the early to mid-1980s, and it is likely that these weapons entered the country during the same period.

Of the single-shot, disposable recoilless weapons and rocket launchers, the dataset contained the following models: RPO-A (three examples), RShG-1(two), RShG-2(two), WPF89-2(two), and RPG-75(one) (see Photos 3 and 4). The Russian KBP RPO-A recoilless weapon and Bazalt RShG-1 and RShG-2 rocket launchers fire thermobaric⁹ munitions of 93 mm, 105 mm, and 72.5 mm in calibre, respectively. While the RPO-A is a purpose-built design that was first adopted in 1988, the RShG series is adapted from the RPG-26 and RPG-27 anti-tank rocket launchers, and entered service in or around 2000. These systems are intended to deliver a multi-purpose effect at ranges of 120–200 m, depending on the system. Two of the RPO-A recoilless weapons and one each of the RShG-1 and RShG-2 rocket launchers bear markings indicating that they were produced in 2007, which suggests that they may have entered Libya as part of the substantial Russian arms deal agreed in 2004 and delivered over subsequent years.

The dataset contains two Chinese WPF89-2 thermobaric rocket launchers designed for engaging personnel inside structures. The WPF89-2 is an enhanced version of the earlier WPF89-1 and features an explosively formed penetrator (EFP) precursor charge designed to penetrate thick masonry before delivering the thermobaric charge into the target building. This model is believed to have entered Chinese military service in 2003 (Jenzen-Jones and Yan, forthcoming). Both examples in the dataset are marked to indicate production in 2007. A single RPG-75 recoilless weapon is included in the dataset. This weapon delivers a 68 mm HEAT warhead at ranges of up to 300 m. Markings on the RPG-75 indicate that it was produced in 1977.

Anti-tank guided weapons

Five distinct models of ATGW were documented in the dataset, including both Eastern Bloc and NATO types. The 9M17 Falanga (NATO reporting name: AT-2 'Swatter') and 9M14 Malyutka (NATO reporting name: AT-3 'Sagger') are first-generation Soviet ATGW systems. Markings indicate that at least one of the two 9M17 models observed is a 9M17P (AT-2C) variant, which was the first in the series to introduce semi-automatic command to line-of-sight (SACLOS) guidance, making it much easier for operators to use. The Libyan armed forces under Qaddafi were known to operate these ATGWs from Mi-8 and Mi-25/35 helicopters, and are believed to have received some 100 9M17 series missiles from the Soviet Union in 1984. Markings indicating that at least one of the documented missiles is a 9M17P model seem to contradict available import data suggesting that the AT-2A version was delivered (IISS, 2016; SIPRI, 2016).

Large numbers of 9M14 series weapons are distributed throughout the Middle East and North Africa region, and have seen service in Algeria, Egypt, Iran, Iraq, Mali, Morocco, and elsewhere. Libya is known to have received some 10,000 9M14M (AT-3B) missiles from the Soviet Union in the period 1975–82 (SIPRI, 2016). This particular model uses manual command to line-of-sight (MCLOS) operation and is wire-guided. The dataset contains a single 9M14 series missile. Both the 9M14 and 9M17 series missiles documented in the dataset were offered for sale as missiles only, and would need a firing post for initiation and guidance.

The 9M111 Fagot (NATO reporting name: AT-4 'Spigot') is the only second-generation former Warsaw Pact ATGW in the dataset. This system employs SACLOS guidance and is a substantial improvement on the earlier 9M14 Malyutka series. One primary improvement is the reduction of its minimum range to only 70 m, compared to the 500 m of its predecessor. One 9M111 missile and one later 9M111M missile were documented in the dataset (see Photo 5). The 9M111M Faktoriya (NATO reporting name: AT-4C 'Spigot C') had a new motor and improved range. These weapons pose a more substantial risk to newer armoured fighting vehicles in the region, with an armour penetration capacity of at least 400 mm RHAe. Markings on the 9M111M in the dataset indicate that it was produced in 1983, and although numerous 9M111 and 9M111M systems were documented during the 2011 civil war, their exact routes of entry into Libya are unknown.

The MILAN series of ATGW was developed by MBDA subsidiaries based in France and Germany.¹⁰ The German companies produce the launch post and missile warhead, while the missile is assembled in France, from where the complete ATGW system is typically exported (Duquet, 2014). MILAN series systems were directly supplied to both government and rebel forces in Libya. In 2007 France and Libya signed a US 218 million deal for the export of 1,000 MILAN 3 anti-tank missiles (France, 2011; Lewis, 2007). The UN Panel of Experts on Libya also reported the delivery in 2011 of 'military materiel from Qatar to the revolutionaries in Libya, including French [MILAN systems]' (UN, 2012, para. 95).

Photo 5 A 9M111M ATGW advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

The dataset contains three MILAN F3 missiles and a MIRA thermal sight that are likely to have been delivered to Libya under the 2007 contract with France (see Photo 6). There is also a MILAN F2 (DM 92) missile tube bearing German markings and the serial number 246002 (see Photo 7). Four other DM 92 missiles with lower serial numbers¹¹ were previously identified in Libya and were reported by the German Bundestag to have never been held in the Bundeswehr's inventory nor exported from Germany (Germany, 2011).

Photo 6 A MIRA thermal sight for MILAN series ATGWs advertised in a Libyan social media group used to trade arms.



Photo 7 A MILAN F2 missile tube bearing German markings advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

Man-portable air defence systems

Source: ARES (2016)

Two MANPADS systems that their sellers claimed to be complete have been documented in Libyan online arms trading groups, as well as two missile tubes without gripstocks or thermal batteries. Three gripstock units were also offered for sale without other components. Both 'complete' systems are 9K32M Strela-2M12 models (NATO reporting name: SA-7b 'Grail') and all gripstock units are 9P58 models (see Photos 8 and 9). While no prices were publicly advertised for the 9K32M systems, two of the 9P58 gripstock units were advertised with asking prices of LYD 8,000 (USD 5,800) and LYD 4,000 (USD 2,900) in March and October 2015, respectively. In the case of the former gripstock, the seller claimed to have already received an offer of LYD 6,000 (USD 4,350). One commenter stated that LYD 5,000 (USD 3,625) is the market price for a single 9M32M missile (for the 9K32M system) in its launch tube, supplied without a gripstock or thermal battery. The same individual also stated that 'it's something all the front lines are looking for and don't have enough of' (Smallwood, 2015). MANPADS missiles are generally exported in larger quantities than the (reusable) gripstocks, which means that gripstocks are often in high demand. While improvised batteries have been developed for use with 9K32M systems, it would be nearly impossible for non-state groups to develop an improvised gripstock (Smallwood, 2014). The markings on one 9P58 unit indicated that it was produced in 1981.

One 9M32M missile and one 9M342 missile, both in launch tubes, were also documented. The 9M32M is used with the 9K32M system; however, the 9M342 is used with the significantly more advanced 9K338 Igla-S (NATO reporting name: SA-24 'Grinch') MANPADS. The 9M342 was offered for sale with a compatible 9B238 battery/coolant unit. Visible markings indicated that the missile was manufactured in 2005. Images of shipping documents provided to the authors by confidential sources in Libya indicate that more than 250 9M342 missiles were delivered to Libya under a 2004 contract with Russia for a variety of arms and munitions. The 9M342 missiles were supplied to Libya as part of a vehicle-mounted system and no gripstocks are believed to have been exported. Russian sources have claimed that the 9M342 missiles present in Libya are not compatible with the 9P522 gripstock of the 9K338 MANPADS (Schroeder, 2014); however, other sources¹³ have contradicted this. Photo 8 9P58 MANPADS gripstock advertised in a Libyan social media group used to trade arms.



Photo 9 A 9K32M MANPADS advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

Finally, a 9F912 launch simulator for the 9F622 training model of the 9K32M system was also documented. The 9F912 bears markings indicating that it was produced in 1981. The 1980s-era gripstock and simulator that were documented are consistent with other field research conducted in Libya that examined MANPADS (Chivers, 2011). Soviet, Bulgarian, Pakistani, Polish, Russian,¹⁴ and Yugoslavian MANPADS and MANPADS components have been documented in Libya to date, with all except for the Pakistani and Russian examples indicating production dates in the 1980s. This matches available import data: Libya is known to have received up to 1,000 9K32M systems from Yugoslavia in 1984–85, for example (SIPRI, 2016).

Grenade launchers

In May 2008 Libya placed an order for EUR 12 million worth of small arms, light weapons, and small-calibre ammunition with FN Herstal (Spleeters, 2012). The intended recipient of the order was the 32nd Reinforced Brigade of the Libyan Army, popularly known as the 'Khamis Brigade'. The order included 367 F2000 self-loading rifles fitted with Lance-Grenades 1 (LG1) under-barrel grenade launcher modules (see Jenzen-Jones, 2016 for details). The LG1 is designed specifically for the F2000 and chambered for standard 40 × 46SR mm low-velocity cartridges. Six examples of the LG1 are found in the dataset, each attached to an F2000 rifle.

One Russian GM-94 pump-action grenade launcher is contained in the dataset (see Photo 10). The GM-94 is chambered for a proprietary 43 x 30 mm cartridge, with the standard issue round being the VGM93.100 thermobaric grenade. These are produced primarily from polymer and are designed to achieve a limited lethal radius, minimizing collateral damage in urban conflicts and allowing the user to fire the weapon at near-point blank ranges (Jenzen-Jones and Popenker, 2015). The seller appeared to be advertising this weapon as a point of pride. While no markings are visible in the image available, the grenade launcher likely entered Libya after the lifting of the first UN arms embargo on the country in September 2003. Significant quantities of Russian materiel are known to have been exported to Libya under an early 2004 contract (Jenzen-Jones, 2016).

Photo 10 A KBP GM-94 pump-action grenade launcher advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

One GL06 40 x 46SR mm grenade launcher produced by Swiss firm B&T AG was also documented in the dataset. The GL06 was introduced in 2006. It is marketed as 'the most accurate 40 mm launcher on the market' and is capable of firing a wide range of standard-sized lethal and less-lethal munitions (B&T, n.d.). It is unclear how this weapon came to be in Libya. GL06 type launchers have previously been documented in the hands of Kurdish forces in Iraq. It is important to note that the GL06 is produced under license by four other companies.

Anti-materiel rifles

The Zastava Arms M93 'Black Arrow' is an anti-materiel rifle chambered for either .50 BMG ($12.7 \times 99 \text{ mm}$) or $12.7 \times 108 \text{ mm}$ cartridges (see Photo 11). It is a bolt-action design and is capable of engaging lightly armoured targets at long ranges—up to 1,800 m, according to the manufacturer (Zastava Arms, 2013). The dataset includes two examples of M93 'Black Arrow' rifles. A 2013 media report claims that a USD 100 million deal was due to be signed between Libya and Serbia that would include significant numbers of M84 general-purpose machine guns, M21 self-loading rifles, unspecified grenade launchers, M93 anti-materiel rifles, and other weapons (Serbia Business, 2013).¹⁵

Photo 11 A Zastava Arms M93 'Black Arrow' bolt-action anti-materiel rifle advertised in a Libvan social media group used to trade arms.



Source: ARES (2016)

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Other weapons

In addition to the weapons in the categories above, the dataset contained a handful of other systems. Two M40A1-type recoilless rifles were included: one appears to be a Chinese Type 75 and the other an original M40A1. Both show considerable signs of wear and long service. One 82 mm mortar that cannot be conclusively identified from the available imagery is also included in the dataset. Its physical features indicate that it is likely of former Warsaw Pact origin.

Three multiple-barrel 107 mm rocket launchers of the Chinese Type 63 pattern were documented. Two appear to be of Chinese origin, while the third is a North Korean copy designated the Type 75. Air-to-surface multiple-barrel rocket launchers were also listed on the social media platforms that were monitored. Four UB-16-57 rocket pods appear in the dataset (see Photo 12). These rocket pods, firing the 57 mm S-5 series of rockets, are most likely of Soviet origin. One Matra Type 155 rocket pod, which fires 68 mm SNEB rockets, was

Photo 12 A UB-16-57 air-to-surface rocket pod advertised in a Libyan social media group used to trade arms.



Source: ARES (2016)

also documented. Both 68 mm and 57 mm rocket pods were repurposed and widely use as surface-to-surface systems during the 2011 civil war (Jenzen-Jones and Lyamin, 2014).

Conclusion

The findings presented in this Dispatch are only a sample of available data from the numerous online platforms associated with the illicit trade of small arms and light weapons in Libya. Although the data is limited, it is reasonable to conclude that the online illicit weapons marketplace is growing in terms of both demand and supply.

Although most of the light weapons studied in this Dispatch were of the pre-1992 era, several more-recently acquired weapons were offered for sale. The advertising of relatively advanced ATGWs such as the 9M111M Faktoriya and the MILAN F3 in the Libyan online marketplace demonstrates that sophisticated weaponry is available to those with the means and desire to acquire it. Similarly, the presence of MANPADS in the markets (including complete systems, missiles, and gripstock units) indicates that fears of the proliferation of these types of weapons systems both in Libya and from Libya to elsewhere in the region continue to be well founded.

Online illicit arms markets are still in their infancy in the Middle East and North Africa region, and may continue to develop in both technical sophistication, and the variety and volume of small arms or light weapons offered for sale. Although the platforms themselves may become more difficult to access as policies, moderation techniques, and other factors shape availability, the marketplaces are still made up of individuals selling goods to buyers who want them. Advanced study is needed to identify the sources of arms outside state control and help curb the further proliferation of small arms and light weapons in Libya and the wider region.

Abbreviations and acronyms

ARES	Armament Research Services	HMG	Heavy machine gun
ATGW	Anti-tank guided weapon	KBP	Konstruktorskoe Buro Priborostroeniya
BMG	Browning machine gun	KPV	Krupnokalibernyy Pulemet Vladimirova
DShKM	Degtyareva-Shpagina Krupnokalibernyy		('Vladimirov large-calibre machine gun')
	Modernizirovannyy ('Degtyarev-Shpagin	KPVT	Krupnokalibernyy Pulemet Vladimirova
	large calibre, modernized')		Tankovyy ('Vladimirov large-calibre tank
EUR	Euro		machine gun')
FN Herstal	Fabrique Nationale de Herstal ('National	LG1	Lance-Grenades 1 ('grenade launcher 1')
	Factory of Herstal')	LYD	Libyan dinar
GM-94	Granatomet Magazinnyy ('magazine-fed	MANPADS	Man-portable air defence system(s)
	grenade launcher')	MILAN	Missile d'Infanterie Léger Antichar ('light
HEAT	High-explosive anti-tank		anti-tank infantry missile')

NSV	Nikitin-Sokolov-Volkov (these are the names		than a weapon in current Russian no
	of the weapon's primary designers)		menclature
R	Rimmed (when used as a suffix in cartridge	RPO-A	Reaktivnyy Pekhotnyy Ognemet ('infantry
	calibre designation)		rocket-propelled flamethrower')
RHAe	Rolled homogeneous armourer equivalency	SACLOS	Semi-automatic command to line-of-sight
RPG	Ruchnoy Protivotankovyy Granatomyot	SNEB	Société Nouvelle des Établissements Edgar
	('handheld anti-tank grenade launcher'),		Brandt
	when used for a multi-use launcher such as an	UN	United Nations
	RPG-7; also Reaktivnaya Protivotan kovaya	USD	US dollar
	Granata ('rocket-propelled anti-tank	WPF	Wen Bao Pao Huojian ('thermobaric artillery
	grenade') when used for a disposable rocket		rocket')
	launcher such as an RPG-18, which is	ZPU	Zenitnaya Pulemetnaya Ustanovka ('anti-
	considered a round of ammunition rather		aircraft machine gun system')

Notes

- 1 UN Security Council Resolution 748 of March 1992 imposed an international arms embargo on Libya; however, other sanction regimes were also in place. For example, EU sanctions ran from April 1986 to October 2004.
- 2 This information draws from and augments a larger dataset of nearly 1,400 small arms and light weapons trades assessed in Jenzen-Jones and McCollum (forthcoming).
- 3 Eleven confidential sources with links to the online sale of arms in Libya were interviewed during research for this Dispatch and the forthcoming Working Paper (Jenzen-Jones and McCollum, forthcoming).
- 4 Author interviews with confidential sources, November 2015–February 2016.
- 5 In one particular example an armed group disposed of 'high value' weapons for which ammunition is in short supply in Libya.
- 6 Based on an assessment of the physical features of the weapons.
- 7 All USD figures are approximations, based on a March 2016 exchange rate of USD 1 to LYD 1.37.
- 8 This figure is believed to include the light vehicle on which the weapon was mounted.
- 9 Literally 'cloud explosive'.
- 10 Formerly Euromissile, before a series of acquisitions.
- 11 Numbers 212377, 225064, 225084, and 231176.
- 12 The 9K32M MANPADS consists of the 9M32M missile in the 9P54M launch tube, the 9P58 gripstock, and the 9B17 thermal battery. Note that later model MANPADS utilize a combined battery and cooling unit, referred to as a 'battery/coolant unit' (BCU).
- 13 Author interview with confidential industry source.
- 14 As noted in the text, it remains unclear whether or not Russian 9M342 missiles documented in Libya are compatible with MANPADS gripstocks.
- 15 A number of other arms exports from Serbia to Libya have taken place between 2008 and the present; see Jenzen-Jones and McCollum (forthcoming) for further details.

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