

FINANCING THE WEAPONS OF THE YEMEN WAR

Analysis of the financing of arms companies
that have exported to Saudi Arabia and the
United Arab Emirates · 2015-2019

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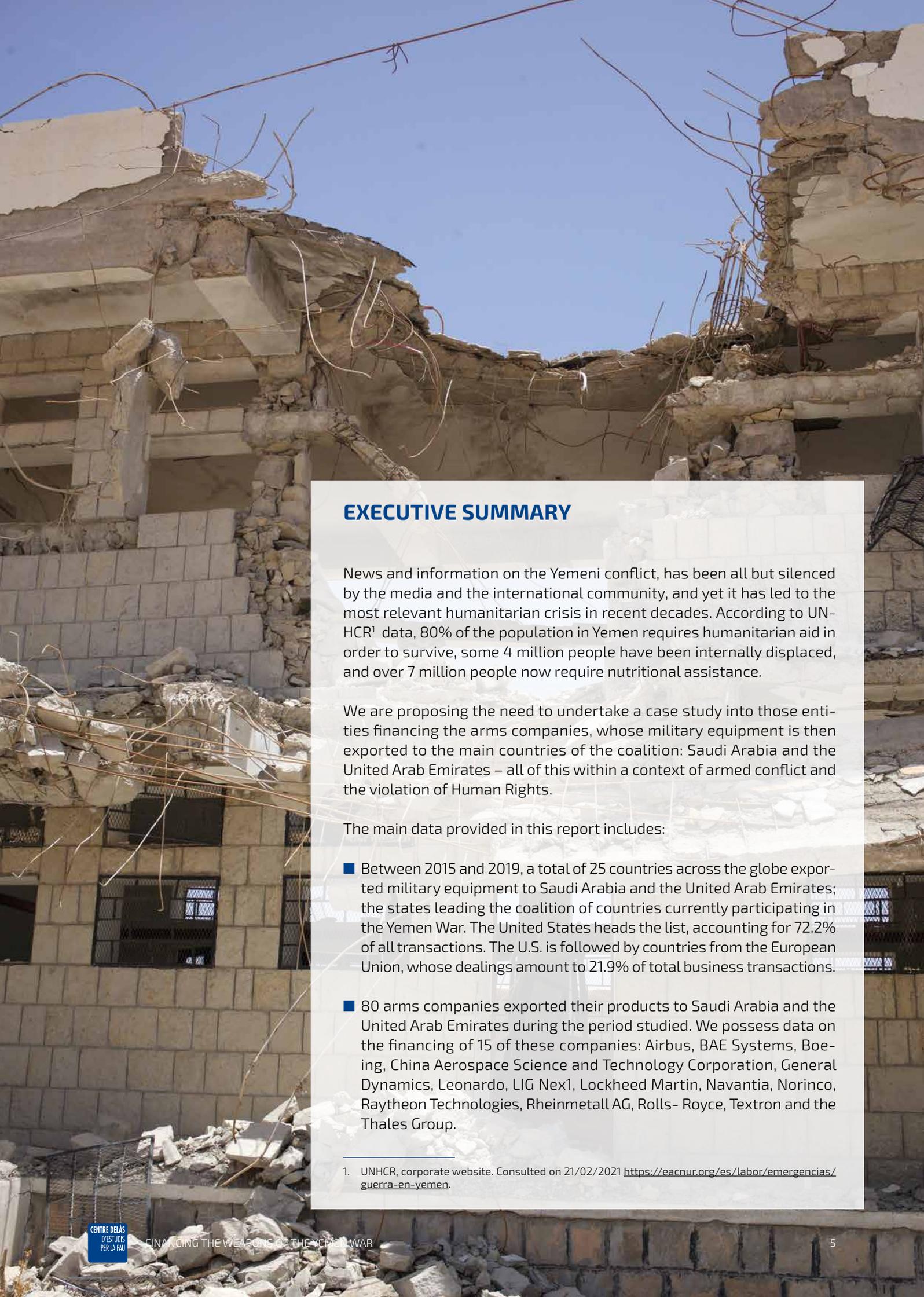
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EXECUTIVE SUMMARY

News and information on the Yemeni conflict, has been all but silenced by the media and the international community, and yet it has led to the most relevant humanitarian crisis in recent decades. According to UNHCR¹ data, 80% of the population in Yemen requires humanitarian aid in order to survive, some 4 million people have been internally displaced, and over 7 million people now require nutritional assistance.

We are proposing the need to undertake a case study into those entities financing the arms companies, whose military equipment is then exported to the main countries of the coalition: Saudi Arabia and the United Arab Emirates – all of this within a context of armed conflict and the violation of Human Rights.

The main data provided in this report includes:

- Between 2015 and 2019, a total of 25 countries across the globe exported military equipment to Saudi Arabia and the United Arab Emirates; the states leading the coalition of countries currently participating in the Yemen War. The United States heads the list, accounting for 72.2% of all transactions. The U.S. is followed by countries from the European Union, whose dealings amount to 21.9% of total business transactions.
- 80 arms companies exported their products to Saudi Arabia and the United Arab Emirates during the period studied. We possess data on the financing of 15 of these companies: Airbus, BAE Systems, Boeing, China Aerospace Science and Technology Corporation, General Dynamics, Leonardo, LIG Nex1, Lockheed Martin, Navantia, Norinco, Raytheon Technologies, Rheinmetall AG, Rolls-Royce, Textron and the Thales Group.

1. UNHCR, corporate website. Consulted on 21/02/2021 [https://eacnur.org/es/labor/emergencias/ guerra-en-yemen](https://eacnur.org/es/labor/emergencias/guerra-en-yemen).

- Hundreds of financial entities from the international armed banking sector provided a total of 607 thousand million dollars to the main arms supplying companies equipping the armies of Saudi Arabia and the UAE between 2015 and 2019, when they took military action against the Yemeni civilian population.
- Among the 50 entities at the forefront of the international armed banks that finance those arms companies supplying the main armies involved in the Yemen War (2015-2019) are some of America's leading banks, such as Black Rock, Goldman Sachs, Morgan Stanley and Citigroup, in addition to European banks such as Deutsche Bank, Barclays, BNP Paribas, the insurer AXA, Unicredit, public companies such as Spain's SEPI and the Norwegian Government Pension Fund – Global, in addition to the two main Spanish banks; the BBVA and Banco Santander.
- The Spanish Armed Bank allocated 8,519 million dollars to 8 companies that manufactured weapons for export to Saudi Arabia and the United Arab Emirates. Those companies that have profited from its services and financial investments are: Airbus, Boeing, General Dynamics, Leonardo, Navantia, Raytheon Technologies, Thales and Rheinmetall AG.
- The BBVA and Banco Santander are the two Spanish banks that have assigned the largest amount of financing to those arms companies supplying the main armies involved in Yemen War, with a total of 5,231 million dollars between 2015 and 2019.



STOP the U.S.
DRONE WAR
ON YEMEN

INTRODUCTION

We are continually expanding and updating our international database on Armed Banking with new information on the financing of the main arms companies in the world. Access to this data gives us the opportunity to implement an extensive variety of analyses using different approaches.² In terms of this report, the abovementioned data allows us to broaden our knowledge and probe further into the investigation of this specific case study - the armed conflict in Yemen. This task involves an analysis of those banks responsible for financing the weapons exported to countries linked to the conflict.

This report is part of the analysis on the relationship between banks and arms companies that the Delàs Centre has been undertaking for several years. We have used the concept of 'armed banking' to refer to those investment entities that finance, and as a result, promote the arms industry. This is a controversial relationship that is undertaken in a variety of different manners, and includes shareholdings, export financing, the issuance of bonds and promissory notes, investment funds and the granting of credits and loans.

In order to carry out the investigation, we first made a comprehensive analysis of all world exports made during the period designated for study, that is, between 2015 and 2019. This task was performed taking into account the information from the UPPSALA³ database that places 2015 as the year in which the armed conflict began, and with the study terminating in 2019, as this is the date of the most recent information available in the SIPRI⁴ database.

2. The reports on Spanish armed banks published to date, available for online consultation in Spanish, Catalan and English are: Dirty Business. The Spanish Banks that Finance Arms Producers (2011), The Armed Bank. Explosive Investments of Banks and Savings Banks (2012), which led to the publication in book format of: The Armed Bank versus the Ethical Bank, 2013, Explosive Investments. Banking deals with Spanish arms companies (2012), The Evolution of Armed Banking in Spain (2013), Banks that Invest in Arms. Update on the Financing of Nuclear Weapons, Cluster Bombs and the Main Spanish Military Industries (2011-2016) (2016), From the Armed Bank to the Ethical Bank. Towards a Coherence of Policies and a Culture of Peace. The Case of Barcelona City Council (2018), From Armed Banking to Ethical Banking. Towards a Coherence of Policies and a Culture of Peace. The Case of the Valencian Government (2018), Armed Banking in Spain 2019 (2019) and Insurers and Pension Funds that Finance Arms Companies. An Update on the Armed Bank in Spain 2020 (2020).
3. UCDP/PRIOD Armed Conflict Dataset version 20.1, available at: <https://ucdp.uu.se/downloads/index.html#armedconflict>
4. Stockholm International Peace Research Institute (SIPRI), <https://www.sipri.org/databases/armstransfers>

The SIPRI data on arms exports, which have been analysed in terms of category, country and TIV⁵ volume, are those used predominantly in the first two chapters. The first chapter is a review with a global perspective, concerns those countries across the globe behind the transactions made to Saudi Arabia and the United Arab Emirates during the period studied. We decided to focus the report on the latter two states, as they are the leaders of the international coalition, and because they intervened on a military basis in the armed conflict throughout the period. This military action took place with the support of the United States, while no import control measures were applied, despite the evidence of the involvement of these countries in the Yemen War.

This first chapter also analyses the annual variability of exports in addition to those categories whose export represents a greater volume in terms of TIV. At this point, it was important to ascertain which companies manufacture the types of military equipment exported in order to then specify the type of weapons used, this information was also necessary in order to detect all those companies that were producing those weapons that were later exported.

In the second chapter, we take a further step towards specification, while we also mention all those compa-

nies detected in our investigations. Nonetheless, our analysis focuses primarily on those exports made by 15 companies, - organisations about which we have information on their financing in the International Armed Banking Database. This analysis includes the name of the weapons exported, a description of them (so as to clarify the type of weapons referred to) and the estimated number of exports that were authorized and undertaken.

The third chapter establishes the links between the arms companies and those banks responsible for financing them, both internationally and in Spain, where the BBVA and Santander stand out as leaders of the state armed bank. In total, a sample of the 194 financial entities that appear in our previous reports on armed banking ranking is analysed, and this information is rounded off with those entities that revealed the highest economic volumes according to the global⁶ Fortune 500 Ranking for 2020.

Finally, taking into account all that presented in the report, we have included those conclusions that serve as a summary, and we have highlighted the most significant data mentioned throughout the three chapters, where we have focused our attention on what we consider to be the most relevant aspects from among the results of the research undertaken.

5. TIV stands for Trend Indicator Value – a reference that the SIPRI has created as a value of measurement in order to facilitate the comparison between different arms and to identify general trends from a single system that measures the volume of international transfers of the main conventional armaments. It is expressed in millions of units. For more information go to: <https://sipri.org/databases/armstransfers/sources-and-methods#TIV-tables>

6. An international business magazine known for its annual list of the 500 entities with the most profits, volumes of assets and influence of the US and the world <https://fortune.com/global500/2020/search/?sector=Financials>



1. COUNTRIES THAT EXPORT ARMS FOR THE YEMEN WAR (2015-2019).

This chapter details world exports of arms to Saudi Arabia and the United Arab Emirates during the period between 2015 and 2019, i.e. from the year in which the civil war in Yemen⁷ began to the year in which data is currently available on arms transfers to both leading countries in the coalition.

The methodology used consists of an analysis of arms exports provided by the Stockholm International Peace Research Institute (SIPRI). Using this information, an overall image has been provided that includes all those countries that have exported arms to Saudi Arabia and the United Arab Emirates, the level of their participation in terms of arms suppliers on a worldwide scale, the development of arms transfers throughout these years, those categories of military products that have been exported the most, and those countries that the most conspicuous due to the higher levels of sales.

1.1 INTERNATIONAL ARMS TRANSFERS TO SAUDI ARABIA AND THE UNITED ARAB EMIRATES 2015-2019

Using SIPRI data updated to 9 March 2020, Figure 1 provides an overview of all those countries that exported arms to Saudi Arabia and the United Arab

7. On 26 March 2015, the Saudi-led coalition launched Operation Decisive Storm, with four member states of the Gulf Cooperation Council (Bahrain, Kuwait, Qatar and the United Arab Emirates) and four member states of the League of States. Arabs (Egypt, Jordan, Morocco and Sudan).

Emirates during the research period for this report. There are 25⁸ countries in total, whose exports during these years represented a volume of 22,682 million TIV.

This first graph also reveals that most of the exported weapons were destined for Saudi Arabia, which was the recipient country for 78% of all the exports, in comparison with the United Arab Emirates, which accounted for 22% of the latter. Using these first annotations, and with a clearer visualization of the exporting countries during the 2015-2019 period, Graph 2 shows the global participation level for those 25 countries that made arms transfers to the two leading coalition countries.

72% of all exports were made by the United States, reaching a total of 16,197 million TIV. Graph 2 also shows that 22% were made by 13 European Union member states. While the remaining 6% represents exports made by third countries.⁹

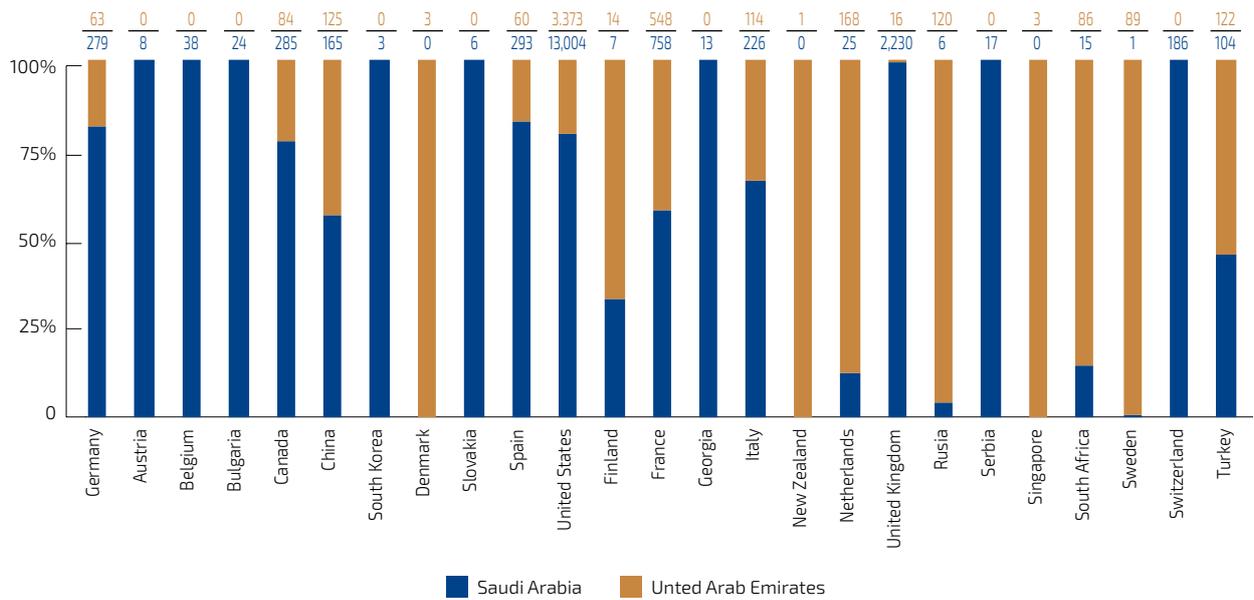
With respect to the 13 member states of the European Union, the United Kingdom¹⁰ was the main country of exportation with 45.2% of the volume of exports made. While France was in second place with 26%. Arms transfers from Spain, Germany and Italy account for 7% each. Added to all the above is the fact that

8. For more information on the volume of exports made by each country and year, see Annex Table 1: Countries that Export Arms to Saudi Arabia and the United Arab Emirates by Year (in Millions TIV) with data disaggregated by country of destination.

9. See Annex - Table 2. Arms Exports by Third Countries to Saudi Arabia and the UAE 2015-2019. .

10. All references made to the UK in this document are pre-Brexit.

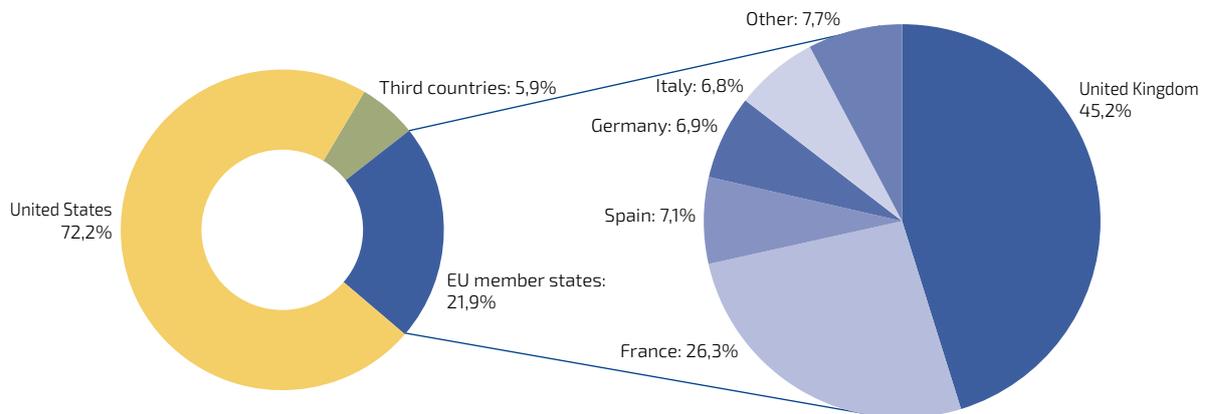
Graph 1. Countries that export Arms to Saudi Arabia and the United Arab Emirates 2015-2019



Source: Authors' own using information from the SIPRI Database

The figures in millions TIV

Graph 2. World Participation in Arms Exports to Saudi Arabia and the UAE 2015-2019



Source: Authors' own using information from the SIPRI Database

according to data from the ENAAT¹¹ search engine, between 2015 and 2019 European Union member states granted 2,681 export licenses to Saudi Arabia,¹² with total value of 75 thousand million¹³ euros, while 3,998 arms export licenses were granted to the United Arab

Emirates for a total of 62 thousand million euros, even though European legislation itself prohibits this, according to the eight criteria stipulated in Common Position 2008/944 / CFSP of 8 December 2008.

11. ENAAT (European Network Against Arms Trade). ENAAT Databrowser, accessed 14 February 2021. Available at: http://enaat.org/eu-export-browser/dashboard?lang=es&metric=licence,approved&destination=united-arab-emirates&year_from=2015&year_to=2019

12. Danilo Albin, "Países de la UE autorizaron más de 2.000 ventas de armas a Arabia Saudí en plena guerra en Yemen", Published 6 January 2021, https://www.publico.es/politica/paises-ue-autorizaron-2000-ventas-armas-arabia-saudi-plena-guerra-yemen.html?utm_source=whatsapp&utm_medium=social&utm_campaign=web

13. This document avoids the use of the term 'billion' due to transatlantic differences in the application of the term

1.2 THE EVOLUTION OF ARMS EXPORTS TO SAUDI ARABIA AND THE UNITED ARAB EMIRATES (2015-2019)

The evolution of arms exports to Saudi Arabia and the UAE during the 2015-2019 period remained stable despite several minor variations. In terms of the number of exporting countries per year, these range from 12 to 21 countries, with 2015 being the year in which more countries exported arms and 2019 was the year with the least number of exports, as shown in Table 1.

The first three countries in the ranking account for 88% of the total transactions carried out during the period. In 2015, 21 countries exported weapons, after the armed conflict had begun. During the following year there was a slight decrease in export volumes, with 19 countries involved. The most significant increase during the entire period occurred in 2017, when exports increased by 31.1%. The United States was

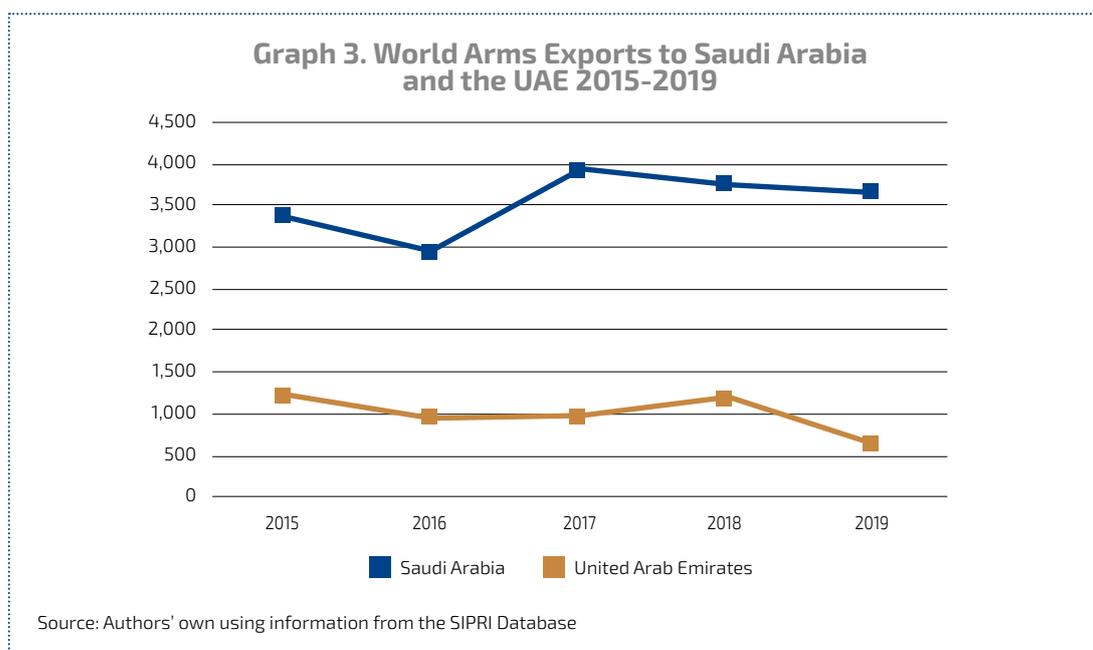
responsible for this increase, as its exports grew by 65% when compared to the previous year, and these continued to grow in 2018 - by 11%. However, in general terms, world exports were maintained, while the number of exporting countries dropped from 16 in 2017 to 14 in 2018. Finally, in 2019 there was a drop of 13% in both exports and in the number of countries involved, the latter amounting to 12.

Graph 3 shows the volume of exports made at a global level in Millions TIV, with data disaggregated by country of destination. It can be seen that transfers to Saudi Arabia were considerably higher than those made to the UAE, and that in general terms they remained stable, despite the increase in 2017 and that, as can be seen in the graph, this rise corresponds to sales made to Saudi Arabia. The aforementioned decline in 2019 is also observed, and this was accentuated in the UAE.

Table 1. Countries that exported Arms to Saudi Arabia and the United Arab Emirates

Supplier	2015	2016	2017	2018	2019	Total
United States *	2,586	2,248	3,724	4,118	3,521	16,197
United Kingdom *	751	858	425	69	143	2,246
France *	328	276	296	197	209	1,306
Canada *	123	18	15	71	142	369
Spain	208	-	15	70	60	353
Germany *	13	29	150	145	5	342
Italy *	166	97	51	13	13	340
China *	50	30	72	86	52	290
Turkey *	92	39	13	41	41	226
Netherlands	25	-	84	84	-	193
Switzerland	142	44	-	-	-	186
Rusia	-	-	-	40	86	126
South Africa *	25	31	20	17	8	101
Sweden	65	12	10	3	-	90
Belgium	-	-	-	-	38	38
Bulgaria	8	1	15	-	-	24
Finland	8	13	-	-	-	21
Serbia	4	11	2	-	-	17
Georgia	-	6	7	-	-	13
Austria	4	4	-	-	-	8
Slovakia	3	3	-	-	-	6
South Korea	-	-	-	3	-	3
Denmark	1	1	1	-	-	3
Singapore	2	1	-	-	-	3
New Zealand	1	-	-	-	-	1
Total general	4,605	3,722	4,900	4,957	4,318	22,502

Source: Authors' own using information from the SIPRI Database. Figures in millions TIV
 Key: * Countries that have continually maintained their arms exports
 - Data not available



1.3 SPANISH EXPORTS TO SAUDI ARABIA AND THE UNITED ARAB EMIRATES

The data provided by SIPRI is limited when discussion of the Spanish case is required. In order to probe further into the analysis, we took data provided by the Spanish Sub-Directorate General for Foreign Trade, which indicate that exports made by Spain to Saudi Arabia and the United Arab Emirates were continuous within the designated period.¹⁴

The difference between the SIPRI data and that provided by the Sub-Directorate General for Foreign Trade correspond to the fact that SIPRI only registers certain types of weapons, while the data from the Ministry of Trade details a wider variety of exported material.¹⁵ Spain exported the most arms to Saudi Arabia 2015, to a total amount of 545.8 million euros, despite the fact that the armed conflict in Yemen had already begun. However, there was a significant decline in 2016 (adding a total of 116.2 million euros). Exports recovered in the following years, amounting to a total of 270.1 million euros in 2017, and decreasing slightly in 2018, to a value of 235.2 million, while finally, in 2019 the total amounted to 35.3 million euros.¹⁶ The largest sale involved two military transport aircraft and ammunition, for the sum of 190.5 million euros, in 2018. However, the Spanish arms industry also exported

other types of arms to Saudi Arabia, such as aircraft parts, artillery ammunition and airborne laser-guided bombs, among others.¹⁷

With respect to the United Arab Emirates, exports reveal substantially lower quantities when compared to Saudi Arabia, reaching a total of 276 million euros throughout the period in question. In terms of military equipment categories,¹⁸ the items that Spain exported the most to the United Arab Emirates were from Category 10, which refers to aircraft, unmanned aerial vehicles (drones). During the period, this category reached a total of 207 million euros in terms of exported materials. The second most exported category to the United Arab Emirates was ammunition (Category 3) which amounted to 44 million euros.

In 2015, sales to the UAE totalled 3.9 million euros, and increased to 26.7 million euros in 2016. However, in 2017 the total value of weapons doubled, reaching a total of 52.9 million euros. This increase derived from the acquisition of bombs, torpedoes and missiles by the UAE, (Category 4) with a value of 15 million euros. In 2018 the total amount decreased by two thirds, to a total of 13.8 million euros. Finally, in 2019, sales to the United Arab Emirates peaked in comparison with the other years, reaching a total of 179.1 million euros, with sales made by Spain in the categories of electronic equipment, technology and armoured vehicles.

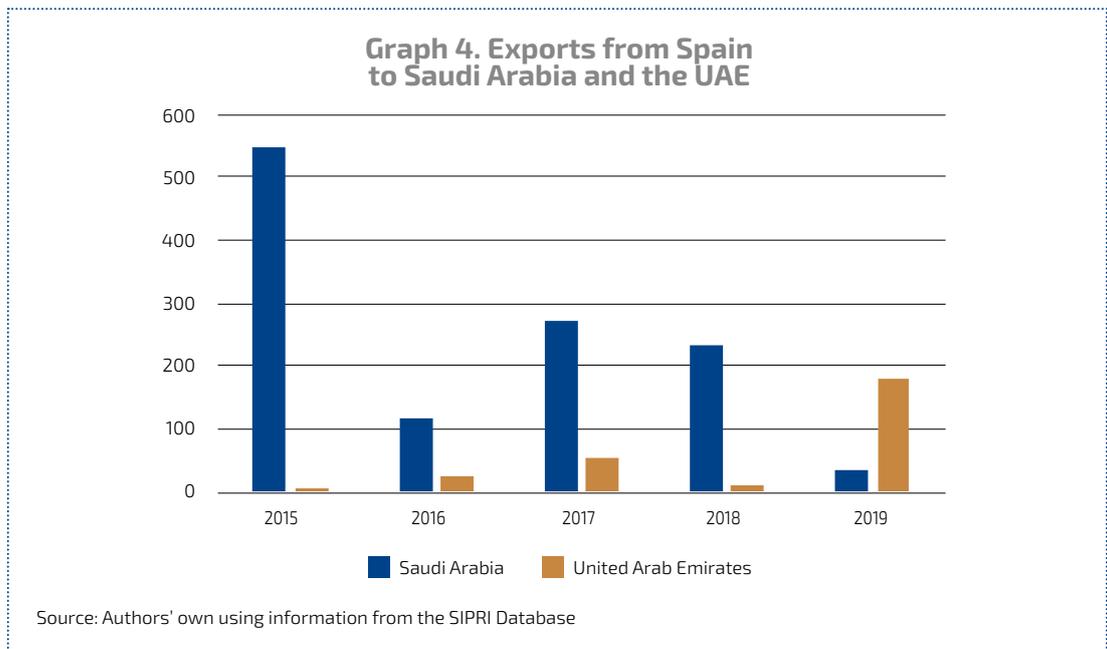
14. For more information, see annexed Table 4: Spanish Exports to Saudi Arabia and the United Arab Emirates (Annual Totals in Millions of Euros).

15. The Spanish Sub-Directorate General for Overseas Trade has a total of 22 categories. For more information, see Order ECC/1493/2016, of 19 September on the updating of the annexes of control regulations on overseas trade for defence equipment, other materials and dual use technological products, as approved by Royal Decree 679/2014, of August: <https://www.boe.es/boe/dias/2016/09/21/pdfs/BOE-A-2016-8633.pdf>

16. See annexed Table 5. Spanish Exports to Saudi Arabia by Military Categories in Millions of Euros 2015-2019.

17. https://www.infolibre.es/noticias/politica/2020/06/28/espana_exporto_arabia_saudi_material_defensa_por_mas_270_millones_entre_2018_2019_108245_1012.html?fbclid=IwAR0po40s3dcVU8O6vnyYb3XtiaVEYU0sr4NCCz-4REOCAotgTnL9rmlNVAU

18. See annexed Table 6. Spanish Exports to the United Arab Emirates by Military Categories in Millions of Euros 2015-2019



1.4 THE MAIN OVERALL MILITARY CATEGORIES EXPORTED TO SAUDI ARABIA AND THE UNITED ARAB EMIRATES

This section details the main categories¹⁹ of weapons exported to Saudi Arabia and the UAE between the years 2015 and 2019 by the 25 exporting countries.²⁰

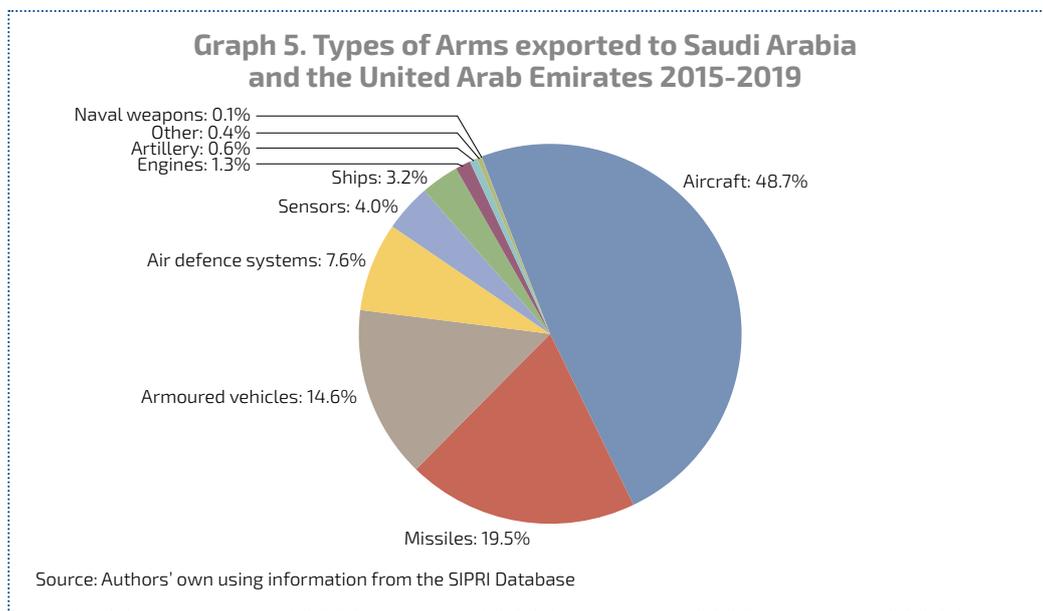
To this end we will be commenting on several notable aspects of world exports with a greater level of precision. However, it must be noted that when detailing the number of orders and shipments or exports made, the figures provided will be estimates or approximate quantities, as calculated by the SIPRI itself. This is be-

cause not all states accurately detailed the quantity of arms that were ordered and exported, and some do not even communicate this information.

Graph 5 shows the percentage (calculated on the basis of volume in TIV) with respect to world exports to Saudi Arabia and the UAE in each of the arms categories during the 2015-2019 period. It can be seen that exports during this period were mostly aircraft, missiles and armoured vehicles. Air defence systems appear on a secondary level. Finally, exports in the categories of sensors and ships must be noted, as well as those of engines, artillery, air defence systems, naval weapons and satellites for military use. This section will focus on the four most important categories in terms of export volume: aircraft, missiles, armoured vehicles and air defence systems, which account for 90.4% of the exports made.

19. Explanation of the types of arms as detailed by SIPRI: <https://www.sipri.org/databases/armstransfers/sources-and-methods#Conventions>

20. See annexed tables - from Table 7 to Table 17. World Exports according to Arms Categories (2015-2019).



AIRCRAFT

This was the main military products category in exports to Saudi Arabia and the UAE, and it accounted for 48.7% of all exports made. According to the SIPRI, it is estimated that between 2015 and 2019, the number of orders placed by both countries came to approximately 851 aircraft, an estimated 615 having been delivered.

With respect to Saudi Arabia, we found orders for up to 649 aircraft during the period; of which some 72% were exported, which comes to a total of 470. In terms of those countries that sell this type of item the most, we found that the United States accounts for the majority of those orders made, with 378 aircraft during the 2015–2019 period, having exported approximately 237. Within the typology of this military category, orders for 154 F-15 ground attack combat aircraft are noteworthy (approximately 86 having been exported), as well as some 90 AH-64E Apache Guardian combat helicopters, and 10 MH-60R Seahawk anti-submarine warfare helicopters. The second most noteworthy country in terms of its sales to Saudi Arabia is the United Kingdom, with a total of approximately 116 aircraft, of which 103 are listed as having been exported, and among were 72 Typhoon combat aircraft and 31 Hawk-100 supply aircraft.

China is worth mentioning, precisely because of its dispute with the United States with respect to military hegemony. It is the third-ranking country in terms of exports to Saudi Arabia. During the 2015–2019 period, a total of 70 aircraft were ordered, approximately 45 having been delivered, these were unmanned, armed aerial vehicles. The exports of 55 Pilatus training aircraft by Switzerland, and 23 EC-145 light helicopters from Germany between 2017 and 2018 are also worthy of mention.

Spanish exports made to Saudi Arabia must also be mentioned, such as the 2 C-295 MPA maritime patrol aircraft, the 2 C-295 transport aircraft and the 3 A-330 MRRT refuelling aircraft, the latter being one of the main aircraft used by the coalition in the war in Yemen, and which was manufactured entirely by Airbus Space and Defence in Spain. In terms of the United Arab Emirates, the data reveals estimated orders for a total of 202 aircraft during the 2015–2019 period, with approximately 145 having been exported. Once again, the United States was the main supplier, with orders for a total of 95 aircraft, of which 78 were delivered. Among the types of aircraft exported were 30 Bell-407 light helicopters, 24 Archangel BPA ground attack aircraft, 17 AH-64E Apache Guardian combat helicopters and 10 UAVs. The next country to supply the UAE with a large amount of aircraft was China, with a to-

tal number of approximately 40 armed UAVs being exported. Brazil had a contract for 24 B-250 training and combat aircraft, however no data is available with respect to their delivery to date.

Another supplier of transport aircraft was Canada, which obtained contracts for 19 DHC-6 Twin Otter aircraft, to date it has been estimated that 12 have been delivered. Finally, 9 helicopters were exported by Italy, while 5 C-295 transport aircraft were exported by Spain.

MISSILES

This is the second category of military items that were exported the most to Saudi Arabia and the UAE, accounting for 19.5% of total exports. It has been estimated that a total of 191,546 missiles were authorized for export during the 2015–2019 period, of which approximately 74,496 were delivered.

With respect to Saudi Arabia, it has been estimated that almost 29% (43,099 missiles) out of the 150,012 orders have already been exported. The United States exported the largest numbers of missiles to Saudi Arabia, with orders for more over 140,000 missiles, a total of 36,000 having been exported. Among the main types of missiles delivered were the 16,895 guided bombs, such as the GBU-24 Paveway-3 and the GBU-39, 17,864, in addition to anti-tank missiles such as the BGM-71 TOW and 680 anti-ballistic missiles, such as the MIM-104F.

The second country with the highest number of orders and arms deliveries made was the United Kingdom. This country exported an estimated 3,520 missiles, including the Brimstone, (long-range radar-guided missiles) Storm Shadow air-to-surface missiles and 2,400 Paveway-4 guided bombs. Bulgaria however stands out as the third-ranking arms exporting country, with 2,200 9M111 Fagot anti-tank missiles, and was followed by France with a total of 1,180 exported missiles, including long-range, radar-guided and anti-tank missiles.

With respect to the United Arab Emirates, it has been estimated that about 75% of the missiles purchased were exported (31,397 of the 41,534 orders placed). The United States once again tops the list of major suppliers with 23,397 exported missiles. And guided bombs are again the most exported types of missiles, such as the Paveway, the GBU-39 or the JDAM.

Russia appears in this scenario with 3,000 exported anti-tank missiles. Also noteworthy are exports from South Africa with 1,820 Al Tariq air-to-surface missiles. This same missile was also exported by Turkey,

with a total of 2,200 units. Finally, and with fewer exports, are countries such as France and Italy with a total of 150 anti-ship missiles exported by each state, among which the MM-40-3 Exocet (France) and the Mars-2 (Italy) stand out.

ARMoured VEHICLES

The third type in terms of the main military categories exported to Saudi Arabia and the UAE are armoured vehicles, which account for 14.6% of total exports. The total number of orders placed by both countries stands at an estimated 9,754 vehicles.

The main supplier countries for materials in this category are the United States, France, Turkey and Canada. The United States exported a total of approximately 2,346 vehicles to Saudi Arabia and 2,983 to the United Arab Emirates. The item most exported by the United States to Saudi Arabia in this category was the M-ATV armoured patrol vehicle, while the UAE favoured the MaxxPro armoured personnel carrier.

France, which solely exported arms to Saudi Arabia, sold a total of approximately 1,035 vehicles, including 500 ARIVE (an armoured personnel carrier). Turkey exported an estimated 400 Rabdan infantry fighting vehicles to the UAE and a total of approximately 670 M-113A300 armoured personnel carriers to Saudi Arabia. Finally, Canada exported an approximate total of 1,780 vehicles to Saudi Arabia, including Piranha transport vehicles and different versions of the LAV-700, in their adaptations as tank destroyers, armoured fire support vehicles and infantry combat vehicles.

AIR DEFENCE SYSTEMS

The fourth most exported military category item to Saudi Arabia and the United Arab Emirates were air defence systems, with 7.6% of exports to both countries. The number of orders has been estimated at 87.

Some 78 are believed to have been exported to Saudi Arabia and 2 to the United Arab Emirates.

The countries that exported this type of weapon were France and the United States. With respect to France, the majority of air defence systems were the mobile MPCV type, in a total of 59 orders, these were exported to Saudi Arabia. In terms of the United States, the most exported system was the Patriot PAC-3 anti-ballistic system, with an approximate total of 24 units, which were exported to Saudi Arabia, together with an undetermined number that were sent to the UAE. The United States also exported its THAAD system - some 7 units of this equipment were delivered to Saudi Arabia, and 2 were exported to the UAE.

It is important to note that Raytheon Technologies' GBU-24 Paveway guided bombs were used in the attack on a water pump factory in Sana'a on 22 September 2016, according to a report submitted in January 2017 by the Panel of Experts on Yemen. An estimated 3,100 guided bombs pertaining to this model were exported by the United States to Saudi Arabia between 2013 and 2016.

The 2017 Yemen Panel of Experts' report also details the GBU-12 Paveway guided bomb attacks made on Hajjah hospital on 15 August 2016 and the 8 October 2016 attack in Sana'a on a civilian funeral. In the attack on the hospital, 19 people died and 24 were injured, while in the attack on the funeral, 32 people lost their lives and 695 were injured. All these attacks have been classified as violations of International Humanitarian Law under United Nations mandates, given that the main targets were civilian infrastructures. There is evidence that a hundred of these bombs were exported between 2010 and 2011. In 2019, Saudi Arabia commissioned Raytheon Technologies with the manufacture of an additional 59,000 units of the GBU-12 Paveway.



2. COUNTRIES THAT MANUFACTURE THE ARMS EXPORTED TO THE YEMEN WAR (2015-2019)

In this chapter, taking the SIPRI data used in the previous chapter as a basis, all global arms transactions made between 2015 and 2019 to Saudi Arabia and the United Arab Emirates have been taken into account. It has been found that little clarity exists with respect to the data that refers to these transactions, both in terms of the amount of material purchased or that finally exported, as well as with regard to the years in which the purchases or the deliveries took places, probably due to the situation of conflict in experienced by the destination countries and the scant political interest in providing transparency.

Using the available data, searches were made on companies responsible for manufacturing each product, and it has been possible to count up to 53 companies²¹ worldwide that exported arms to Saudi Arabia

21. Achleitner Products, ACMAT, Airbus, Airbus Helicopters, BAE Systems, Beechcraft, Boeing, Caterpillar, Chengdu Aircraft Industry Group, China Aerospace Science and Technology Corporation (CASC), CMN Group, Cummins Engine Company Inc, Denel Mechem, Detroit Diesel Corporation, FNS Defence Systems Inc, General Electrics Aviation, General Dynamics, General Dynamics Land Systems – Canada, GIAT Industries/ Nexter, Goodrich, Gorkovskiy Avtomobilny Zavod (USSR), Hensoldt, John Cockerill, Kongsberg Defence & Aerospace, Leonardo, LIG Nex1, LMT Technologies, Lockheed Martin, MBDA Missile Systems, Mercedes-Benz, Navantia, New Technologies Global Systems (NTGS), Nexter Systems, NPO Splav, Omsktransmash, Oshkosh Defense, Patria Land Oy, Pilatus Aircraft, PPT Namenska, Pratt & Whitney Canada, Raytheon Technologies, Renault Truck Defense, Rheinmetall AG, Rolls-Royce, Scientific Technical Center Delta, Sikorsky, Soframe, Terradyne Armored Vehicles Inc, Textron, Thales Group, KBP Instrument Design Bureau, Yugoimport SDRP, Yuzhnoye Design Office.

during this period and 45²² that sold their products to the United Arab Emirates.

This comes to a total of 80 companies that have undertaken transactions with at least one of the two countries under analysis, and among them, 18 businesses that have manufactured arms that have been exported to both countries.

2.1 COMPANIES WITH DATA AVAILABLE ON THEIR FINANCE

We possess data on the financing of 15 of these companies: Airbus, BAE Systems, Boeing, China Aerospace Science and Technology Corporation -CASC-, General Dynamics, Leonardo, LIG Nex1, Lockheed Martin, Navantia, Norinco, Raytheon Technologies, Rheinmetall AG, Rolls-Royce, Textron and Thales. It may also be assumed that their financing influences other transactions made by divisions of the companies themselves, such as Airbus Helicopters, by other companies that form part of the same financial conglomerate, as is the case of Beechcraft and Bell Helicopter (trademarks of Textron) and by companies that have

22. Airbus, Al Jasoore, Bae Systems, Bell Agusta Aerospace, Bell Helicopter, Boeing, Bombardier Aviation, Calidus LLC, Caterpillar, Chengdu Aircraft Industry Group, CMN Group, Cummins, Damen, KBP Instrument Design Bureau; Degtyarev Plant, Denel Dynamics, EdePro, Electro Optic Systems, FFG, General Atomics, Goodrich, IMS, Iomax, Leonardo, Lockheed Martin, MBDA Missile Systems, Naval Group, Navistar Defense, Nimr, Norinco, Oshkosh Defense, Pacific Aerospace, Patria Land Oy, Pratt & Whitney Canada, QinetiQ, Raytheon Technologies, Roketsan, Rolls-Royce, SAAB, SCANIA, ST Engineering Land Systems, Swede Ship, Tawazun Dynamics, Terma, Thales Group, Viking Air.

been acquired by others, such as Sikorsky (owned by Lockheed Martin).²³

In order to select and include these fifteen companies in the study, the year in which the order for the manufacture of weapons was ordered was followed as a point of reference and only, in one case, that of the parent company Textron, a large American conglomerate with a defence division that controls arms companies such as Bell Helicopter. The year of delivery or year of export were taken into consideration, given that the year of order was prior to the export period studied, however those arms that were exported in the period studied were noted.

If we look into the types of weaponry manufactured by these fifteen export companies, the predominant categories (taking units of the exported materials into account) are missiles and armoured vehicles. The total number of missiles whose export was authorized by both Saudi Arabia and the United Arab Emirates amounts to 178,311 units in the period studied, of which estimated data exists on the effective exports of 63,076 missiles. Authorized armoured vehicle exports total 1,125 with estimated exports coming to 1,112. Following these categories are sensors (780 ratified exports and 589 deliveries), aircraft (526 authorized orders and 342 deliveries), engines (50 sanctioned contracts and 36 exports), naval weapons (34 authorized contracts and 8 exports), air defence systems (33 units were sanctioned and 26 were exported), artillery pieces (18 were both approved and exported), ships (9 were authorized) and satellites (2 were approved).

2.2 ARMS TRANSFERRED ACCORDING TO THE MANUFACTURING COMPANY

The following data covers all that produced by each of these companies using the data available from the SIPRI on arms transfers.

AIRBUS

During the period from 2015 to 2019, the trans-European Airbus (a French, German and Spanish owned company based in the Netherlands) exported 4 C-295 aircraft to Saudi Arabia, 2 of which were to be used as transport and 2 for maritime patrols, in addition to 3 A-330 MRTT supply and transport aircraft. It is believed that these same Airbus models were also exported to the United Arab Emirates (probably 5 C-295 aircraft and an unknown number of A-330 MRTTs). Furthermore, 23 EC145 light helicopters were allegedly exported to Saudi Arabia, these air-

craft are manufactured by the Airbus Helicopters division.

BOEING

As for the export of aircraft, the American company Boeing is also of note; it has been estimated that over 80 F-15 Advanced Eagle combat aircraft were exported to Saudi Arabia, and more than 70 AH-6S and AH-64E Apache Guardian model combat helicopters - of which 86 were authorized, in addition to 8 CH-47F Chinook transport helicopters, however there is no record of how many of the latter were exported. In terms of those transactions made with the United Arab Emirates, 2 C-17A Globemaster-3 transport aircraft were exported, an unknown number of AH-64E Apache Guardian combat helicopters (evidence exists that 17 were authorized) and an estimated 12 CH-47F Chinook transport helicopters (20 being authorized).

Boeing was also the second-ranking manufacturer in terms of missile exports to Saudi Arabia and the United Arab Emirates. It is estimated that the company exported over 11,800 JDAM guided bombs to both countries (more than 56,800 were authorized) and more than 5,600 GBU-39 SDB small-diameter bombs, these were designed to allow aircraft to transport more of these projectiles (6,000 were authorized). Estimates also point to the export of over 200 RGM-84L Harpoon-2 anti-ship missiles (nearly twice as many had been ordered) together with an unknown number of AGM-84H SLAM-ER air-to-surface missiles (650 of which were authorized).

Another American company, Lockheed Martin, ranked third in terms of the number of missiles exported to both countries, within the group of companies studied. This manufacturer is noteworthy for its MIM-104F PAC-3 and THAAD anti-ballistic missiles. It is known that exports of these were made to both countries, although the exact quantity is unknown. Data solely exists on the purchase of 360 THAADs by Saudi Arabia and 192 by the UAE, it is assumed that the latter were exported. There is also evidence of the export of around 2,176 AGM-114K HELLFIRE anti-tank missiles to Saudi Arabia and 1,000 of the same models to the UAE. The company also provided some 124 surface-to-surface missiles (the MGM-140B ATACMS model) and 390 guided GMLRS rockets to the UAE.

Furthermore, Lockheed Martin also exported material that is classified under other arms categories: 2 KC-130J Hercules aircraft to Saudi Arabia, 12 M-142 HIMARS self-propelled multiple rocket launchers to the UAE, MMSC frigates, of which 4 are known to have been purchased, in addition to at least two THAAD model anti-ballistic missile systems that were ex-

23. This chapter analyses the exports made by these 15 companies, including those companies related to those mentioned.

Table 2. Companies that manufactured Arms for Export to Saudi Arabia and the United Arab Emirates (2015-2019)

CATEGORY	ORDERED	DELIVERED	DESIGNATION	YEAR OF ORDER	YEAR OF DELIVERY	RECIPIENT
AIRBUS						
Aircraft	3	3	A-330 MRTT	2009	2014-2015	Saudi Arabia
	2	2	C-295	2015	2015-2017	Saudi Arabia
	2	2	C-295MPA	2015	2018	Saudi Arabia
	5	[5]	C-295	2017	2019	United Arab Emirates
	3	-	A-330 MRTT	2019	-	United Arab Emirates
BAE SYSTEMS						
Armoured Vehicles	[20]	[20]	M-88A2 HERCULES	[2016]	2018-2019	Saudi Arabia
	72	[72]	RG-31 Nyala	2011	2013-2015	United Arab Emirates
	24	[24]	RG-31 Nyala	2015	2016	
	542	[542]	Caiman	2014	2016-2018	
Missiles	-	-	WGU-59 APKWS	-	-	Saudi Arabia
Aircraft	22	22	Hawk-100	2012	2016-2017	Saudi Arabia
	22	[9]	Hawk-100	2015	2019	
Naval weapons	2	2	SAK-70 Mk-2 57mm	2015	2017-2018	United Arab Emirates
BOEING						
Missiles	600	[600]	JDAM (GBU-31B)	2012	2016	Saudi Arabia
	[400]	[220]	RGM-84L Harpoon-2	[2012]	2016-2018	
	[650]	-	AGM-84H SLAM-ER	[2013]		
	1000	[600]	GBU-39 SDB	[2013]	2017-2019	
	[2.645]	[2.645]	JDAM (GBU-31, GBU-38, GBU-54 & GBU-56)	2016	2018	
	[45.000]	-	JDAM (GBU-31, GBU-38)	[2017]	-	United Arab Emirates
	[5.000]	[5.000]	GBU-39 SDB	[2014]	2015-2019	
	3.600	[3.600]	JDAM	2014	2015-2016	
	[3.504]	[3.504]	JDAM (GBU-31)	[2016]	2017-2018	
	1.500	[1.500]	JDAM	2017	2018	
Aircraft	12	[12]	AH-64E Apache Guardian	[2009]	2014-2015	Saudi Arabia
	[24]	[24]	AH-64E Apache Guardian	[2011]	2015-2016	
	84	[84]	F-15 Advanced Eagle	2011	2016-2019	
	70	2	F-15 Advanced Eagle	2011	2016	
	12	[12]	AH-64E Apache Guardian	[2012]	2015	
	24	[24]	AH-65	2014	2016-2018	
	24	-	AH-64E Apache Guardian	2017	-	
	8	-	CH-47F Chinook	2017	-	United Arab Emirates
	[12]	[12]	CH-47F Chinook	2011	2012-2015	
	2	2	C-17A Globemaster-3	2015	2015	
17	-	AH-64E Apache Guardian	2018	-		
CHINA AEROSPACE SCIENCE & TECHNOLOGY CORPORATION						
Aircraft	[5]	[5]	CH-4	[2014]	2015	Saudi Arabia
GENERAL DYNAMICS						
Armoured Vehicles	[314]	[314]	M-1A2S	2009	2012-2017	Saudi Arabia
	[153]	[140]	M-1A2S	2016	2018-2019	

CATEGORY	ORDERED	DELIVERED	DESIGNATION	YEAR OF ORDER	YEAR OF DELIVERY	RECIPIENT
LEONARDO						
Sensors	2	[2]	RAT-315	2013	2015	Saudi Arabia
	6	[6]	RAT-315	2016	2016-2017	
	6	6	Orion RTN-25X	2004	2011-2017	United Arab Emirates
	2	-	Seaspray	2015	-	
	1	-	Seaspray	2017	-	
Naval weapons	3	-	Super Rapid 76mm	2015	-	Saudi Arabia
	[4]	-	Super Rapid 76mm	[2017]	-	
	5	-	Super Rapid 76mm	[2018]	-	United Arab Emirates
	6	6	Super Rapid 76mm	[2003]	2012-2016	
	2	-	Super Rapid 76mm	[2019]	-	
LIG NEX1						
Missiles	[100]	[100]	Raybolt	[2017]	2018	Saudi Arabia
LOCKHEED MARTIN						
Missiles	[2.176]	[2.176]	AGM-114L HELLFIRE	2014	2015-2016	Saudi Arabia
	[320]	[320]	MIM-104F PAC-3	2015	2017-2019	
	-	-	MIM-104F PAC-3	2018	-	
	-	-	MIM-104F PAC-3	2018	-	
	-	-	MIM-104F PAC-3	2018	-	
	[360]	-	THAAD missile	2018	-	
	192	[192]	THAAD missile	2012	2015-2019	United Arab Emirates
	390	[390]	GMLRS	2015	2017	
	124	[124]	MGM-140B ATACMS	2015	2017-2018	
	[1.000]	[1.000]	AGM-114K HELLFIRE	2017	2018	
	[60]	-	MIM-104F PAC-3	2019	-	
	[452]	-	MIM-104F PAC-3	2019	-	
Aircraft	2	2	KC-130J Hercules	2013	2016	Saudi Arabia
Ships	4	-	MMSC	2017	-	Saudi Arabia
Artillery	12	12	M-142 HIMARS	2015	2018	United Arab Emirates
Air defense systems	[7]	-	THAAD	2018	-	Saudi Arabia
	2	[2]	THAAD	2011	2015-2016	United Arab Emirates
Sensors	[37]	[37]	APG-78 Longbow	[2010]	2014-2016	Saudi Arabia
	[193]	[94]	AAQ-13 LANTIRN	[2011]	2016-2019	
	[158]	[82]	AAQ-33 Sniper	2012	2016-2019	
	[10]	-	PTDS	2017	-	
NAVANTIA						
Ships	5	-	Avante-2200	2018	-	Saudi Arabia
NORINCO						
Missiles	[500]	[350]	Blue Arrow-7	2017	2017-2019	United Arab Emirates
Artillery	[6]	[6]	AH-4 155mm	[2018]	2019	United Arab Emirates
		-	SR-5	[2018]	-	

CATEGORY	ORDERED	DELIVERED	DESIGNATION	YEAR OF ORDER	YEAR OF DELIVERY	RECIPIENT
RAYTHEON TECHNOLOGIES						
Missiles	[2.400]	[2.400]	Paveway-4	2013	2015	Saudi Arabia
	[600]	[200]	AGM-88 HARM	[2011]	2018-2019	
	[300]	[300]	AIM-9X Sidewinder	[2011]	2012-2019	
	[3.100]	[3.100]	Paveway (1.100 GBU-24 Paveway-3 & 2.000 Paveway Dual)	[2011]	2013[2016	
	[500]	[500]	AIM-120C AMRAAM	2013	2015-2019	
	[355]	[355]	AGM-154 JSOW	2014	2016-2018	
	[4.941]	[4.941]	BGM-71F TOW-2B	[2014]	2015-2018	
	[10.747]	[10.747]	BGM-71 TOW	2014	2015-2018	
	[8.120]	[8.120]	Paveway	2015	2016-2017	
	618	[175]	AGM-154 JSOW	2017	2019	
	[100]	-	RIM-116A RAM	[2017]	-	United Arab Emirates
	[200]	-	RIM-162 ESSM	[2017]	-	
	[59.000]	-	Paveway	[2019]	-	
	[96]	[96]	RIM-162 ESSM	2006	2015	
	[200]	[200]	RIM-116A RAM	2007	2011-2016	
	[2.000]	[2.000]	Talon	2013	2015-2018	
	[25]	[25]	RIM-116A RAM	[2016]	2018	
	[96]	[96]	RIM-162 ESSM	2016	2018-2019	
	100	[100]	MIM-104C PAC-2	2017	2019	
	[13.640]	[6.000]	Paveway	2017	2018-2019	
300	[100]	AIM-9X Sidewinder	2018	2019		
-	-	RIM-162 ESSM Block-2	[2019]	-		
Air defense systems	21	[21]	Patriot PAC-3	2011	2014-2017	Saudi Arabia
	[3]	[3]	Patriot PAC-3	2015	2017-2019	
	-	-	Patriot PAC-3	2018	-	United Arab Emirates
Naval weapons	5	-	Mk-41	[2018]	-	Saudi Arabia
	2	-	Mk-48 GMVLS	[2019]	-	United Arab Emirates
RHEINMETALL AG						
Sensors	26	[26]	X-TAR	2011	2015-2016	Saudi Arabia
Naval weapons	5	-	GDM-008 35mm	2018	-	Saudi Arabia
ROLLS ROYCE						
Engines	8	-	MT-30	2017	-	Saudi Arabia
	[24]	[24]	MTU-2000	2009	2013-2015	United Arab Emirates
	4	4	BR-710	[2012]	2018-2019	
	8	8	MTU-4000	2013	2017	
	4	-	BR-710	2015	-	
	2	-	BR-710	2017	-	
TEXTRON						
Missiles	[1.300]	[1.300]	CBU-97 SFW	2013	2014-2015	Saudi Arabia

CATEGORY	ORDERED	DELIVERED	DESIGNATION	YEAR OF ORDER	YEAR OF DELIVERY	RECIPIENT
THALES GROUP						
Sensors	[60]	[60]	Damocles	[2007]	2009-2017	Saudi Arabia
	[20]	[20]	Ground Master-60	2011	2013-2015	
	[4]	[4]	COBRA	[2014]	2019	
	[10]	[10]	FLASH	2015	2018-2019	
	[225]	[225]	SQUIRE	2009	2011-2015	United Arab Emirates
	17	[17]	Ground Master-200	2013	2015-2017	
	3	-	COBRA	2019	-	
-	-	RDY	2019	-		
AIRBUS & THALES GROUP						
Satellites	2	-	Helios-2	2015	-	United Arab Emirates
AIRBUS HELICOPTERS (controlled by Airbus)						
Aircraft	23	[23]	EC145	2016	2017-2018	Saudi Arabia
BEECHCRAFT (controlled by Textron)						
Aircraft	4	[4]	King Air-350 ISR	[2012]	2015-2016	Saudi Arabia
	[2]	[1]	King Air-350 ISR	2016	2019	
BELL HELICOPTER (controlled by Textron)						
Aircraft	30	[30]	Bell-407	[2013]	2014-2016	United Arab Emirates
SIKORSKY (controlled by Lockheed Martin)						
Aircraft	24	[24]	S-70/UH-60L	2012	2014-2015	Saudi Arabia

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates

ported to the UAE, while 7 were purchased by Saudi Arabia, although it is not known when they were exported.

Finally, the company exported at least 131 radars of the APG-78 Longbow and AAQ-13 Lantirn models (a total of 230 were authorized), in addition to 82 AAQ-33 Sniper electro-optical systems (158 authorized) to Saudi Arabia for installation in helicopters and combat aircraft. In 2017, Saudi Arabia acquired a dozen 74K model or PTDS (Persistent Threat Detection System), aerostats.

Sikorsky, a company owned by Lockheed Martin, received a request for 102 S-70/UH-60L model helicopters for Saudi Arabia, of which over 52 have been exported, as well as a dozen MH-60R Seahawk anti-submarine helicopters.

BAE SYSTEMS

BAE Systems exported up to 638 RG-31 Nyala (96) and Caiman (542) model armoured personnel carriers to the United Arab Emirates, in addition to 20 M-88A2 Hercules armoured recovery vehicles to Saudi Arabia. It also produced an estimated 44 Hawk-100 supply and transport aircraft, of which an estimated 31 were exported to Saudi Arabia. It also exported 2 SAK-70 Mk-2 57mm model naval guns to the United Arab Emirates. The company also exported WGU-59 APK-

WS model air-to-surface missiles, however neither the quantity ordered nor the quantity exported is known.

According to Amnesty International, there is evidence regarding the use of Caiman transport vehicles in the Yemen.²⁴

THALES GROUP

According to SIPRI data, the French Thales Group has exported more than 336 sensors to both countries. In terms of both models and receivers, the group exported an estimated quantity of 225 SQUIRE ground surveillance radars, 60 Damocles electro-optical aircraft systems, 20 Ground Master-60 aerial surveillance radars, 4 COBRA artillery locator radars and a ten FLASH model sonars for antisubmarine warfare to Saudi Arabia. Regarding exports to the United Arab Emirates, it is estimated that 17 Ground Master-200 air surveillance radars were received, in addition to an undetermined number of COBRA radars and RDY fighter aircraft radars.

Furthermore, according to SIPRI data, in 2015 a request to the group from the Thales Group and Airbus was made by the United Arab Emirates for two Helios-2 model reconnaissance satellites. There is no record of the final quantity exported.

24. <https://arms-uae.amnesty.org/en/>

LIG NEX1 AND NORINCO

Another subgroup of arms companies that deserve special mention is the South Korean company LIG NEX1, which is a producer of precision-guided munitions and military electronics, and the Chinese Norinco, which produces all kinds of vehicles, weapons and military explosives. According to the evidence included in the report²⁵ published by PAX²⁶ at the end of 2018, after the ban on cluster bombs, LIG NEX1 continued to produce the Tactical Surface Launch Missile, while Norinco continued to manufacture the Type 90B rocket or the Fire Dragon among other models of cluster-type munitions.

In the period studied, LIG NEX1 exported 100 Raybolt anti-tank missiles to Saudi Arabia. Norinco however received a request for 500 Blue Arrow-7 model anti-tank missiles, of which an estimated 350 were exported to the United Arab Emirates. The latter company also exported 6 AH-4 155mm towed guns and an unknown number of SR-5 model self-propelled multiple rocket launchers to the UAE.

RAYTHEON TECHNOLOGIES

The American multinational Raytheon Technologies, which was recently created from the merger of Raytheon and United Technologies, two of the most important companies in the world in terms of manufacturing guided missiles and engines for military use respectively, and the company exported more missiles to Saudi Arabia and the UAE than any other company. Raytheon Technologies is noteworthy for the number of "Paveway"²⁷ guided bombs it exported; 13,620 to Saudi Arabia (72,620 were authorized) and 6,000 to the UAE (13,640 were authorized).

Raytheon Technologies is also a manufacturer of BGM-71 model anti-tank missiles, of which more than 15,600 were exported to Saudi Arabia, and it has been estimated that over 500 AGM-154 JSOW guided bombs were exported (973 had been ordered). The company has also manufactured some 600 AGM-88 HARM model anti-radiation missiles at the request of Saudi Arabia, of which it exported 200 units, in addition to 500 long-range AIM-120C AMRAAM air radar-guided missiles, 300 short range AIM-9X Sidewinder model missiles and the RIM-116A RAM (100) and RIM-162 ESSM (200) surface-to-air missiles.

During the period studied, the company also manufactured and exported an estimated 2,000 air-to-surface Talon missiles to the United Arab Emirates, which also ordered 300 short-range AIM-9X Sidewinder model air-to-air missiles (of which 100 were exported), and over 500 MIM-104C PAC-2 (100), RIM-116A RAM (225) and Rim-162 ESSM (over 192) model surface-to-air missiles.

It has also been estimated that the company exported over 24 Patriot PAC-3 missile systems to Saudi Arabia and an unknown number to the UAE, while both countries ordered naval surface-to-air Mk-41 model missile systems (Saudi Arabia acquired 5 and Mk-48 GMVLS (the UAE acquired 2).

It must be recalled that evidence was found of GBU-24 Paveway guided bombs that were used in an attack on 22 September 2016 at a water pump factory in Sana'a, according to the report sent in January 2017 by the Panel of Experts on Yemen, which was presented to the United Nations Security Council. This attack was a violation of International Humanitarian Law with respect to criteria established by the United Nations,²⁸ as its main objective was a civilian infrastructure. In 2019, Raytheon Technologies was commissioned by Saudi Arabia to manufacture 59,000 units of a similar model of guided bomb, the GBU-12 Paveway. Saudi Arabia had previously purchased around 100 units that were exported between 2010 and 2011, and evidence of the use of these weapons in civilian attacks in Yemen has been revealed. These events include the attacks on the Hajjah hospital on 15 August 2016 and the attack on 8 October 2016 in Sana'a on a civilian funeral. In the attack on the hospital, 19 people died and 24 were injured, while in the attack on the funeral 32 people lost their lives and 695 were injured.

RHEINMETALL AG

This German company specializes in the production of combat systems. It also supplies spare parts for weapons and produces various armoured combat vehicles. It exported 26 X-TAR air surveillance radars to Saudi Arabia and manufactured 5 GDM-008 model 35mm anti-missile artillery systems for export to Saudi Arabia, although it is unknown when the transaction will be made.

LEONARDO

The Italian company Leonardo, which previously went under the name of Finmeccanica, manufactures several aircraft models, such as Eurofighter

25. The Worldwide Investment in Cluster Munitions report, PAX, 2018. <https://www.paxforpeace.nl/publications/all-publications/worldwide-investment-in-cluster-munitions-2018>

26. PAX is a Dutch pacifist NGO, and the promotor of the Don't Bank on the Bomb campaign. <https://www.paxforpeace.nl/>

27. Paveway is a brand that has been registered by Raytheon Technologies since 2018, although it may also be used as a generic name for guided bombs.

28. Himmiche, Ahmed et. al. (2017), *Final report of the Panel of Experts on Yemen*, UN Security Council, p.46

Typhoons and F-35 fighters. This company mainly exported sensors and naval weapons. With respect to sensors, it exported an estimated number of 8 RAT-315 model air surveillance radars to Saudi Arabia and 6 Orion RTN-25 fire control radars to the UAE, which also purchased 3 radars for Seaspray model marine patrol aircraft that allegedly have not yet been exported. The company also manufactured 12 naval Super Rapid 76mm guns for Saudi Arabia and 8 for the UAE.

ROLLS ROYCE

Data also exists that provides information on the British company Rolls Royce, which is also included in the rankings prepared by SIPRI, in position twenty-three. This manufacturer also specializes in military aviation with the production of engines, however it also constructs military vessels. In the period studied, Rolls Royce received an order for 8 MT-30 gas turbines from Saudi Arabia, while the UAE ordered 24 MTU-2000 diesel engines, 8 MTU-4000 diesel engines and 10 BR-710 model turbofan aircraft engines.

GENERAL DYNAMICS

In the fifth place of the SIPRI rankings is General Dynamics. The US defence and aerospace company exported approximately 454 M-1A2S battle tanks to Saudi Arabia (they had authorized 467).

TEXTRON

With respect to the parent company Textron, a large US conglomerate with a powerful defence division that controls weapons companies such as Bell Helicopters and Beechcraft, the year that its weapons were delivered has been taken into account, as even though the order was processed before the period studied (2013), it is known that the year in which the export became effective is within the period under analysis. During this period, Textron is estimated to have exported 1,300 CBU-97 SFW guided bombs to Saudi Arabia.

In terms of the abovementioned subsidiaries, Beechcraft exported 5 of the 6 King Air-350 ISR ground surveillance aircraft ordered to Saudi Arabia, while Bell Helicopter exported 30 Bell-407 light helicopters to the United Arab Emirates.

THE CHINA AEROSPACE SCIENCE & TECHNOLOGY CORPORATION (CASC)

This Chinese company exported 5 armed UAVs (drones) model CH-4 to Saudi Arabia.

NAVANTIA

The Spanish shipping company Navantia, built 5 Avante-2200 corvettes, these were commissioned by Saudi Arabia in 2018 and will be delivered in 2022.



3. THE ARMED BANK THAT FINANCES ARMS FOR THE YEMEN WAR

3.1 ON THE FINANCING OF COMPANIES THAT EXPORTED WEAPONS TO SAUDI ARABIA AND THE UAE FROM 2015 TO 2019

This chapter details the number of financial entities that have provided their services to those weapons companies that were identified in the previous chapters as exporters of arms to Saudi Arabia and the UAE during the period when they carried out numerous military actions in Yemeni territory, some of which have been defined as war crimes. This chapter reveals the statistics that link these financial institutions and those arms companies that exported military equipment during the conflict. We have begun with the data on these entities that is available on the International Armed Banking Database. More than 607 thousand million dollars were found to have been destined to finance those arms companies that exported weapons destined for the war in Yemen between 2014 and 2019

In order to perform a preliminary analysis of this data, a sample of 192 financial entities that appeared in our previous reports in the ranking of armed banks was chosen, we then added to this those organisations with larger economic volumes, according to the

Global Fortune 500²⁹ Ranking for 2020. In order to investigate the possible financing of the weapons used in the Yemeni conflict in more detail we calculated the amounts that were destined to cover the financing needs required by those companies responsible for supplying the exports of the importing countries, the contenders and the promoters of this war, Saudi Arabia and UAE during the first five years of the conflict.

The table, which is shown below, details the fifteen companies that exported weapons, the total financing amount received by each one, the number of financial entities that provided financial support, and the percentage of the total that the figure received represents with respect to the total amount (in terms of the information gathered in this investigation). This allows us to discover which companies received the most funding from those financial entities investigated.

If we compare the previous table with the table of the SIPRI Rankings of the Largest Arms Dealers,³⁰ it can be seen how the same companies, Boeing and Lockheed Martin occupy the first two positions. These organisations received 59% of all the financing and investments identified. Boeing did business with 53 financial institutions in the period studied, while Lockheed Martin dealt with 39.

29. A global business magazine known for its annual list of the 500 organisations with the highest profits, volumes of assets and the most influence of the US and the world <https://fortune.com/global500/2020/search/?sector=Financials>.

30. See annexed Table 18: The SIPRI Ranking of the Largest Arms Dealers.

Table 3. The Financing of Arms Companies that have exported Weapons to the Main Armies involved in the Yemen War 2015-2019

	Financial entity	Country	Total (USD)
1	Capital Group	United States	\$ 55,011,957,948.60
2	Vanguard	United States	\$ 52,228,706,297.34
3	BlackRock	United States	\$ 47,994,161,101.63
4	State Street	United States	\$ 43,213,287,879.38
5	Verisight	United States	\$ 28,171,353,784.56
6	T.Rowe Price	United States	\$ 27,971,795,429.46
7	Bank of America	United States	\$ 19,809,312,454.48
8	JPMorgan Chase	United States	\$ 15,827,361,595.30
9	Wells Fargo	United States	\$ 11,994,612,912.59
10	Citigroup	United States	\$ 10,309,044,571.94
11	Fidelity Investments	United States	\$ 9,855,164,917.09
12	TIAA	United States	\$ 7,307,040,708.00
13	Prudential Financial (US)	United States	\$ 7,163,008,227.88
14	Crédit Agricole	France	\$ 6,466,695,648.52
15	Goldman Sachs	United States	\$ 6,390,120,424.80
16	Société Générale	France	\$ 6,336,660,312.37
17	Morgan Stanley	United States	\$ 6,290,332,595.26
18	Mitsubishi UFJ Financial	Japan	\$ 6,061,637,938.03
19	Royal Bank of Canada	Canada	\$ 6,036,282,186.03
20	UBS	Switzerland	\$ 5,367,987,794.57
21	Deutsche Bank	Germany	\$ 4,842,716,573.93
22	Lloyds Banking Group	United Kingdom	\$ 3,941,155,167.11
23	Invesco	United States	\$ 3,696,952,486.05
24	Banco Bilbao Vizcaya Argentaria (BBVA)	Spain	\$ 3,401,309,592.96
25	Sociedad Estatal de Participaciones Industriales	Spain	\$ 3,219,035,811.99
26	Barclays	United Kingdom	\$ 3,134,877,622.04
27	BPCE Group	France	\$ 3,040,715,157.71
28	BNP Paribas	France	\$ 2,957,391,205.27
29	Toronto-Dominion Bank	Canada	\$ 2,874,138,508.10
30	US Bancorp	United States	\$ 2,769,068,760.06
31	Legal & General	United Kingdom	\$ 2,639,027,291.51
32	AXA Equitable	United States	\$ 2,572,015,823.83
33	MassMutual Financial	United States	\$ 2,140,017,994.42
34	Sumitomo Mitsui Trust	Japan	\$ 2,066,441,945.42
35	HSBC	Switzerland	\$ 1,837,119,091.93
36	Santander	Spain	\$ 1,830,195,192.39
37	Commerzbank	Germany	\$ 1,665,954,291.92
38	AXA	France	\$ 1,437,670,732.60
39	Sun Life Financial	Canada	\$ 1,422,799,867.48
40	Norwegian Government Pension Fund - Global	Norway	\$ 1,385,642,194.29
41	UniCredit	Italy	\$ 1,344,939,358.88
42	New York Life Insurance	United States	\$ 1,324,997,744.31
43	New York State Common Retirement Fund	United States	\$ 1,237,614,161.60
44	European Investment Bank	Europe	\$ 1,210,811,251.60
45	State Farm	United States	\$ 1,077,239,000.00
46	Allianz	Germany	\$ 1,044,873,386.19
47	Northwestern Mutual Life Insurance	United States	\$ 989,237,806.85
48	China Construction Bank	China	\$ 949,700,000.00
49	China Merchants Group	China	\$ 939,900,000.00
50	Bank of China	China	\$ 887,015,722.71
	Total		\$ 444,147,962,252.31

Source: Authors' own - International Armed Bank Database. Information from the Military Economic Cycle of the Delàs Centre

Special mention must be made of Raytheon Technologies and Leonardo, who since 2017 and 2018 respectively were the main suppliers of RIM-162 ESSM missiles and naval Super Rapid 76mm guns to Saudi Arabia. The latter weapons are compatible with the Avante-2200 corvettes that the Spanish company Navantia is building, which are to be delivered in 2022.

The participation of the financial institutions that lead the ranking in most of the companies studied reveals evidence of their clear links with the arms industry, although this is more pronounced in US financial institutions, which are always among those with the most investment in the war industry. This fact is probably related to the importance of this sector in the economy of the country that allocates more resources to its armed forces, weapons development and contracts in defence matters than any other. This is a safe, public-private partnership business model that attracts the largest institutional investors.

The data that reveals how the five US companies studied accrued 74% of the financing provided by these 194 financial entities; 394 thousand million dollars. Of all of them, the company with the largest number of financial relationships is Raytheon Technologies -120 entities were involved in its financing and shareholdings during the period studied.

European companies, however, account for practically all the remaining investments and financing deals studied, with just over 25%. This figure represents 87 thousand million dollars. The trans-European aeronautical giant Airbus, the world's leading aircraft manufacturer, allocated 18% of its annual sales to the military sector, and received the most financing with almost 8%, representing more than 36 thousand million dollars. Airbus is followed by Britain's BAE Systems with 3.29% (15 thousand million dollars) and the French company Thales, with 2.79% (12 thousand million dollars). Leonardo, accounts for over 4 thousand million dollars, Rheinmetall AG with more than 2 thousand million dollars and Navantia with 480 million dollars. This latter Spanish company received financing from Banco Bilbao Vizcaya Argentaria (BBVA), Bankia, Bankinter, BNP Paribas, the BPCE Group, Credit Agricole, Santander and the Lloyds Banking Group.

With respect to those financial entities that comprise the armed banks that may have financed the war in Yemen, the majority are found in the United States, occupying the top positions in the rankings. However, after them come European countries, such as Germany, France, Italy, Spain, Norway, Switzerland and the United Kingdom. Also on the list are entities from other countries that are further removed from the Eurocentric perspective, but which are also con-

solidated financial epicentres of international scope, such as China, Japan and Canada.

The distribution of the total amount is however highly concentrated in the first 50 positions in the rankings, which account for 96.92% of the selected sample and which represent 72.99% of the total amount available on the database. All of these fifty entities each exceed the 800 million dollars that were allocated to the arms industry between 2015 and 2019. The total specific influence of those entities in the top positions in the ranking, which are occupied by large banks and financial and insurance companies in the United States must be stressed. These positions are held by the following organisations; Capital Group, Vanguard, BlackRock, State Street, the Bank of America, Wells Fargo and the insurance company Prudential Financial. These thirteen top positions assigned over 336 thousand million dollars to finance the companies investigated. In the top fifty companies, 23 of the positions are held by US entities. US organisations contributed over 80% of the financing and investments included in the sample, 371 thousand million dollars. The top fifty companies are detailed below. The annexes detail the complete list of the 194 financial organisations whose clients include those arms companies that sold arms to Saudi Arabia and the UAE during the war in Yemen.

The top five in this war financier ranking comprise the Capital Group, Vanguard, BlackRock, State Street and Verishigt – accounting for 226 thousand million dollars of financing allocated to 12 of the 15 companies studied. These companies are: Textron, Airbus, Thales, Leonardo, BAE Systems, Raytheon Technologies, Rolls-Royce, Boeing, General Dynamics, LIG Nex1, Lockheed Martin and Rheinmetall AG. Half of these are American companies. As will be seen later, Boeing, the US aeronautical giant, is the company to have received the most amount of financing, largely thanks to the 118 thousand million dollars it has received from these five organisations.

Dropping down to the thirteenth position one then finds the first European banking group, which is the French firm Crédit Agricole. This organisation brings together a network of French cooperative banks and has financed ten arms corporations, seven of which are European companies, such as Airbus, to whom it assigned over two thousand five hundred million dollars, the French company Thales, Italy's Leonardo, Britain's BAE Systems and Rolls Royce, Germany's Rheinmetall AG and the Spanish company Navantia.

In the ten positions from seventeen to twenty-six, more diversity is found with respect to the countries of origin of these financial institutions: the United

States, Japan, Canada, Switzerland, the United Kingdom, Germany, Spain and France. These rankings comprise a group of entities that allocated between six and three thousand million dollars and they consist of well-known names on the European and international financial scene, such as Morgan Stanley, Mitsubishi UFJ Financial, the Royal Bank of Canada, UBS, the Lloyds Banking Group, Deutsche Bank, Invesco, Banco Bilbao Vizcaya Argentaria (BBVA), Sociedad Estatal de Participaciones Industriales (SEPI)³¹ and Barclays. The funding for the twelve arms manufacturing companies that exported arms to Saudi Arabia and the United Arab Emirates from these entities amounts to \$46 thousand million. Airbus, Thales, Leonardo, BAE Systems, Raytheon Technologies, Rolls-Royce, Boeing, General Dynamics, Lockheed Martin, Rheinmetall AG, Textron and Navantia are the companies that received funding. The first two financial institutions of Spanish origin occupy positions twenty-five and twenty-six: the BBVA and the Sociedad Estatal de Participaciones Industriales. The BBVA is the habitual leader in Spanish armed banking, and (as will be detailed later), has financed six companies linked to the Yemeni War, and the SEPI appears in the rankings, given that it owns 4.16 % of Airbus shares.

Following these twenty-five entities that exceed three thousand million dollars in financing destined to the arms manufacturing industry, comes another group of ten entities that are responsible for between three thousand and over one thousand five hundred million dollars of financing: BNP Paribas, Toronto -Dominion Bank US Bancorp, Legal & General, AXA Equitable, MassMutual Financial, Sumitomo Mitsui Trust, HSBC, Santander and Commerzbank.

This group also comprises recognized financial names, such as the French bank BNP Paribas, the British bank Legal & General, and AXA Equitable, a company controlled by AXA since it acquired Equitable Holdings in 2004, forming AXA Equitable until 2018, the year when Equitable Holdings was split from the French firm. Most of the above entities have entered into transactions with Airbus, Thales, Leonardo, BAE Systems, Raytheon Technologies, Rolls-Royce, Boeing, Navantia and Rheinmetall AG. Following these financial institutions, whose commitment to these companies exceeds two thousand million dollars, the HSBC and Santander appear in the ranking.

This top 50 of the ranking positions comprise another fourteen entities, such as the aforementioned insurance company AXA, and the insurance companies Allianz and State Farm, major Chinese banks, such as the China Construction Bank, China Merchants' Group

or the Bank of China, due to their investments in the Chinese companies Norinco and the China Aerospace Science & Technology Corporation. Several pension funds, such as the New York State Common Retirement Fund or the Norwegian Government Pension Fund also appear.

3.2 THE SPANISH ARMED BANK THAT HAS FINANCED COMPANIES WHOSE ARMS MAY HAVE BEEN SUPPLIED THE WAR IN YEMEN

In the ranking of the major funders of companies that produce and export arms to the countries involved in the Yemen War, two large banks based in Spain appear: the BBVA and Santander. These two entities have always led in Spanish armed banking statistics as they also do with respect to the financing of the 15 companies studied. However, we have also found other Spanish banking entities working in the same manner: Bankia, Banco Sabadell and Banco Mediolanum, who are responsible for much smaller, yet far from negligible amounts, which also link them to leading companies that manufacture of all kinds of weapons and which are leading players in the global arms trade. The entire Spanish armed bank has channelled a total of 8.686 thousand million dollars to arms companies in countries that exported arms to Saudi Arabia and the UAE during the Yemen War.

BFA is an investment corporation controlled by capital from the Spanish Fund for Orderly Banking Restructuring (FROB) at 100%, and integrated into the Bankia holding company that granted and maintains revolving loans worth over 66 million dollars with Navantia. In 2019, Bankia also decided to invest \$196,190 in Raytheon Technologies. Bankinter shared this credit with the investment company currently integrated in Bankia, taking on the other 50% of the credit, which amounted to 133 million dollars of available credit.

Banco Sabadell is another of the banking entities involved in the funding of this business. Between 2017 and 2019, it collaborated in the financing of General Dynamics, a large US arms conglomerate that has been responsible for reconditioning and manufacturing US M-1A2S tanks for the Saudi Arabian army since 2008.³² In 2016, Saudi Arabia confirmed an order of approximately 1,500 million dollars to the United States³³ that included 153 superstructures of these tanks in order to modernize and convert 133 of those that it already owned, in addition to M2 and M240 machine guns, M520 grenade launchers, in addition to technical and logistical support services. The tanks

32. Army Technology. Consulted 24/02/2021. <https://www.army-technology.com/news/news72167.html>

33. Security and Cooperation Agency: <https://www.dsca.mil/press-media/major-arms-sales/kingdom-saudi-arabia-m1a2s-saudi-abrams-main-battle-tanks-and-m88ala2>

31. (SEPI - a state-owned industrial holding company)

Table 4. The Ranking of the Spanish Armed Banks that have financed Arms Companies supplying the Main Armies involved in the Yemen War 2015-2019

	Financial entity	Total (USD)	Financed companies
1	Banco Bilbao Vizcaya Argentaria (BBVA)	\$ 3,401,309,592.96	Airbus, Boeing, General Dynamics, Leonardo, Navantia, Raytheon Technologies
2	Sociedad Estatal de Participaciones Industriales	\$ 3,219,035,811.99	Airbus
3	Santander	\$ 1,830,195,192.39	Airbus, Boeing, Leonardo, Navantia, Rolls-Royce, Thales
4	Bankia	\$ 66,837,690.00	Navantia, Raytheon Technologies
5	Bankinter	\$ 66,641,500.00	Navantia
6	Banco de Sabadell	\$ 53,549,484.99	General Dynamics, Raytheon Technologies
7	Banco Mediolanum	\$ 44,356,184.30	Leonardo, Raytheon Technologies
8	Tressis Gestion	\$ 851,171.14	Leonardo, Raytheon Technologies
9	Dunas Capital	\$ 805,064.40	Raytheon Technologies
10	Value Tree Wealth & Asset Management	\$ 619,546.76	Leonardo
11	Novo Banco Gestion	\$ 559,725.37	Leonardo
12	Caja Rural	\$ 380,090.03	Leonardo
13	Miurex Inversiones Hispania	\$ 343,419.76	Leonardo
14	Banco Caminos	\$ 278,918.59	Rheinmetall AG
15	Acacia Inversion	\$ 273,292.67	Raytheon Technologies
16	Esfera Capital	\$ 271,841.01	Raytheon Technologies
17	Gesiuris Asset Management	\$ 178,140.52	Raytheon Technologies
18	CIMD Group	\$ 86,968.00	Raytheon Technologies
19	Unicaja Banco	\$ 81,346.05	Leonardo
Total		\$8,686,654,944.93	

Source: Authors' own using the International Armed Bank Database Information from data from the Military Economic Cycle of the Centre Delàs

were delivered between 2018 and 2020.

Banco Mediolanum appears in the Spanish armed bank rankings due to the fact that in 2019, it invested in Leonardo, the large Italian arms manufacturer that has also profited from the war in Yemen and the escalation in arms experienced by the other participant countries. In 2019 Leonardo began manufacturing two new 76mm Super Rapid guns for the two Gowind-2500 frigates that are being manufactured in France for the United Arab Emirates. Since 2018 it has also been manufacturing this same model for the Avante-2200 corvettes manufactured by the Spanish company Navantia that are to be delivered to Saudi Arabia.

The table comprises a total of 19 entities, as shown below, and includes other banking entities that have also invested and entered into Leonardo's share capital, such as Novo Banco and Caja Rural, which did so in June 2019.

As mentioned earlier in this section, the two large Spanish banks, the BBVA and Santander deserve

special attention. They have always led the rankings in terms of armed banking and, year after year, they have continued the trend of following a business strategy that is linked to and this arms industry at a national and international level. The two entities together have allocated over 5,231 million dollars to the 8 companies whose weapons are more than likely to be used by the Alawite and Emirati armies in their military actions in the Yemen War. With respect to the BBVA, which is normally the leader of Spanish armed banking, 3,401 thousand million of the five thousand million dollars that we know financed arms companies in the period studied, may have been destined for the UAE and Saudi Arabia during the war in Yemen.

Its involvement with the sector in terms of volume increased ostensibly between 2017 and early 2019, with its endorsement of General Dynamics, which provided both M-1A2S and LAV-700 class tanks to the Yemen War. These were commissioned in 2014 and some were exported to Saudi Arabia in 2019.³⁴

34. It has been estimated that only 255 of the 742 tanks ordered have been delivered – according to information available to date.

The BBVA has not only financed General Dynamics. As shown in the table above, it also took part in the financing of five other manufacturers that have supplied weapons to both Saudi Arabia and the UAE (although with lower amounts). Boeing and Airbus received over 330 million dollars. Airbus manufactured the 4 C-295W transport aircraft models at its San Pablo (Seville) factory in 2015 at the request of the Saudi Arabian Ministry of the Interior.³⁵ Later, in 2017, the United Arab Emirates ordered 5 more aircraft of this same model from Airbus, and in 2019 the UAE ordered 3 A-330 MRTT model tanker or transport aircraft, which were also manufactured in Spain.

The investment in Raytheon Technologies shares made by the BBVA and Bankia, Sabadell and other financial institutions in 2019 deserves a special mention. In recent years this company has supplied Saudi Arabia with Paveway guided bombs, a concept that, after a legal dispute over the common use of the term with Lockheed Martin, Raytheon Technologies finally succeeded in patenting in 2017.³⁶ Raytheon Technologies is the only company that sells the GBU-12 Paveway model to countries other than the United States. According to the report submitted in January 2017 by the Panel of Experts on Yemen, which was presented to the United Nations Security Council, bombs of the same model were dropped in the attacks on the Hajjah hospital on 15 August, 2016 and on 8 October of the same year on a civilian funeral in Sana'a. The same report made by this group of experts affirms that the only party in the conflict with the capacity to launch this type of ammunition was the coalition led by Saudi Arabia.³⁷

A review of the exports made to Saudi Arabia, shows that this country has been systematically importing this type of guided bomb, manufactured by Raytheon Technologies since 2011. In the attack on the hospital 19 people died and 24 were injured, while in the attack on the funeral 32 people lost their lives and 695 were injured. In 2019, Raytheon Technologies received a new order to manufacture 50,000 new units of this guided bomb model for Saudi Arabia.

The Spanish BBVA bank, has also been related to the Spanish shipping company Navantia and has done so

since 2015, participating (together with other entities) in a syndicated revolving loan of over 347 million dollars. Among these participants is precisely the other large bank that has been financing and investing in the companies that manufacture those weapons that arrive in Yemen, Banco Santander. This loan was granted in conjunction with four other entities: BNP Paribas, the Lloyd's Banking Group, Credit Agricole and Natxis. Banco Santander contributed 38 million dollars and BBVA contributed 87 million dollars.

The Banco Santander has also done business with its shareholdings in six companies that may have sold weapons used in the war in Yemen between 2017 and early 2019 and with the provision of financial services in these companies. The French Thales Group received the most support in this period from Santander, with over 650 million dollars. In addition to participating in the manufacture of nuclear weapons, the two countries analysed were also its final clients, with the supply of various orders for radars and sensors during the last decade. The most recent orders were COBRA high-calibre weapon locating radars. Saudi Arabia requested theirs in 2014 and have had them since 2019, while the United Arab Emirates, made its order in 2019.

Boeing, the large US aircraft manufacturer, also received financial backing from Santander, to the tune of 417 million dollars, between 2017 and 2019. As mentioned in the previous chapter, Boeing exported more than 80 aircraft to Saudi Arabia in the last decade: F-15 combat helicopters, AH-6 Apache Guardian helicopters and CH-47F Chinook transport helicopters, among others. However the item that was exported the most to these countries are JDAM guided bombs, with over 11,000 rounds. In 2017, at the height of the conflict, Saudi Arabia re-ordered 45,000 of these missiles, 27,000 of the GBU-38 model and 18,000 of the GBU-31 model.

Returning to Europe, Banco Santander participated in two syndicated revolving credit lines of over 1,500 million dollars in 2015, and 3,500 million dollars in 2018. These credit lines were provided to Rolls-Royce, where it took on 5% of the amount in each policy, 96 and 175 million dollars respectively.

35. <https://www.defensa.com/espana/primer-c295w-para-arabia-saudita-vuela-sevilla>

36. Consult the patent at: <https://trademarks.justia.com/875/03/paveway-87503495.html>

37. Final report of the Panel of Experts on Yemen. Ahmed Himmiche, Coordinator. *The only party to the conflict with the known capability to deliver the Mark 82 HE A/C bomb with the GBU-12 PAVEWAY II guidance unit is the Saudi Arabia-led coalition*. Page. 212. Consulted 27/02/2021.



BANCA ARMADA ESPAÑOLA: FINANCIACIÓN DE LAS ARMAS DE LA GUERRA DE YEMEN

Análisis de la financiación de las empresas de armas que han exportado a Arabia Saudí y Emiratos Árabes Unidos (2015-2019)

Inicio del conflicto: **2015** hasta la actualidad

Según datos del ACNUR, el **80%** de la población necesita ayuda humanitaria para sobrevivir

Cerca de **4 millones** de desplazados internos

Más de **7 millones** de personas necesitan asistencia nutricional

El conflicto ha causado la muerte de **100.000 personas**

el **67%** de muertes civiles causadas por las ofensivas de la coalición liderada por Arabia Saudí

Países implicados en el conflicto:

	2015	2016	2017	2018	2019
Arabia Saudí	•	•	•	•	•
Emir. Arab. Unidos	•	•	•	•	•
Bahréin	•	•	•	•	•
Egipto	•	•	•	•	•
Jordania	•	•	•	•	•
Kuwait	•	•	•	•	•
Marruecos	•	•	•	•	•
Qatar	•	•	•	•	•
Sudán	•	•	•	•	•

Fuente: Guerra en Yemen, responsabilidad de las armas, recopilada por ECP, IHRC y Centro Doha de Estudios por la Paz (2020).



Fuente: Financiación de las armas de la guerra de Yemen, estudio de la financiación de las empresas de armamento que han exportado a Arabia Saudí y Emiratos Árabes Unidos (2015-2019).



FINANCIACIÓN A LAS EMPRESAS FABRICANTES DE ARMAMENTO EXPORTADO A ARABIA SAUDÍ Y EAU (2015-2019)

1 AIRBUS	\$3.881 M
2 GENERAL DYNAMICS	\$2.581 M
3 BOEING	\$757 M
4 THALES	\$652 M
5 ROLLS ROYCE	\$275 M
6 NAVANTIA	\$259 M
7 LEONARDO	\$256 M
8 RAYTHEON TECHNOLOGIES	\$22 M
9 RHEINMETALL AG	\$278 m
TOTAL	\$8.686 M

AVIÓN DE COMBATE (F-35, F-35)

 HELICÓPTERO (UH-60, UH-60)

 ELECTRÓNICA MILITAR (AN/AP-109, AN/AP-109)

 TANQUES (M1A2, M1A2)

 MISIL MÚLTIPLES (M26, M26)

 DERIVADO MILITAR (M109, M109)

 BARRIL DE FUERBA (M109, M109)

 ARMAS LIGERAS (M109, M109)

 BOMBAS DE PUNTO (M109, M109)

 MÓDULO (M109, M109)

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 Institut de Recerca de Barcelona



CONCLUSIONS

ARMS EXPORTS TO ARMIES LEADING THE ATTACKS IN THE WAR IN YEMEN (SAUDI ARABIA AND THE UAE)

During the 2015–2019 period, a total of 25 countries from across the globe exported military equipment to Saudi Arabia and the United Arab Emirates - the countries leading the coalition participating in the war in Yemen. The United States is at the top of the list, accounting for 72.2% of all transactions. It is followed by a group of countries from the European Union, who are responsible for 21.9% of all arms deals.

The largest volume of exports took place in 2018 if those made to both countries are combined. If the data is analysed separately, most exports were made to Saudi Arabia in 2017, and to the United Arab Emirates in 2015. The most exported weapons worldwide in terms of TIV volume, refers to the SIPRI categories: Aircraft (48.7%), Missiles (19.5%), Armoured Vehicles (14.6%) and Air Defence Systems (7.6%).

Spain maintained exports throughout the period at a steady rate. Taking the categories of the Subdirector General for Foreign Trade into account, the exported material mainly belonged to the following categories: 3 (ammunition and devices for the assembly detonators), 4 (bombs, torpedoes, rockets, missiles), 5 (aiming systems), 10 (aircraft, balloons, parachutes, drones and engines) and 15 (imaging or

surveillance equipment), added to this are the Navantia corvettes, whose delivery began in 2020.

ARMS DEALERS WHO MADE EXPORTS TO SAUDI ARABIA AND THE UAE FROM THE BEGINNING (2015) OF THE WAR IN YEMEN TO 2019

Eighty 80 arms companies exported their products to Saudi Arabia and the United Arab Emirates during the period studied. Fifty-three of them sent their wares to Saudi Arabia, while 45 delivered to the UAE, this includes those 18 companies that made exports to both countries. We possess data on the financing of 15 of these companies: Airbus (which includes Airbus Helicopters), BAE Systems, Boeing, China Aerospace Science and Technology Corporation -CASC-, General Dynamics, Leonardo, LIG Nex1, Lockheed Martin (which includes Sikorsky), Navantia, Norinco, Raytheon Technologies, Rheinmetall AG, Rolls-Royce, Textron (this includes Beechcraft and Bell Helicopter) and the Thales Group.

The most widely exported categories of weapons, in terms of units, were missiles and armoured vehicles. The total number of missiles authorized for export to Saudi Arabia and the United Arab Emirates in the period studied amounts to 178,311 units, among which the BGM-71 and GBU from Raytheon Technologies, the GBU-31 and GBU-38 from Boeing, the CBU-97 SFW from Textron and the MIM-104F PAC-3 and AGM-114K HELLFIRE from Lockheed Martin are all worthy of note. Authorized armoured vehicle numbers total 1,125,

notably the M-1A2S from General Dynamics and the Caiman from BAE Systems. Following these categories are sensors, of which 780 were authorized for export, such as the AAQ-13 LANTIRN and the AAQ-33 Sniper from Lockheed Martin, the X-TAR from Rheinmetall AG and the SQUIRE and Damocles from Thales Group. Within the aircraft category, 526 units were authorized for export, for example, the C-295 from Airbus, the Hawk-100 from BAE Systems, the AH-64E, the F-15 and the CH-47F from Boeing, the Bell Helicopter's Bell-407 and Sikorsky's S-70/UH-60L. In the engine category, 50 exports were authorized, the Rolls Royce MTU-2000 being of note. Exports of 34 naval weapons were also authorized, such as Leonardo's Super Rapid 76mm, 33 air defence systems such as Raytheon Technologies' Patriot PAC-3 and Lockheed Martin's THAAD, 9 ships among which we have noted the 5 Avante-2200 corvettes from Navantia. And, finally, the export of 2 Helios-2 satellites for military use from Airbus and the Thales Group was also authorized.

THE ARMED BANK OF THE WAR IN YEMEN

Hundreds of financial entities belonging to the International Armed Bank have designated a total of 607 thousand million dollars to the main arms companies that supplied the armies of Saudi Arabia and the UAE between 2015 and 2019, when they carried out military actions against the Yemeni civilian population.

Among the 50 entities that lead the ranking of the international Armed Bank that financed arms companies supplying the main armies involved in the war in Yemen (2015-2019), are some of the main US banks, such as Black Rock, Goldman Sachs, Morgan Stanley and Citigroup, as well as European banks, such as Deutsche Bank, Barclays, BNP Paribas, the insurer AXA, Unicredit, and public companies such as the Spanish SEPI or the Norwegian Government Pension Fund – Global, and two large Spanish banks BBVA and Banco Santander.

The Spanish armed bank has channelled 8.686 million dollars to 9 companies that have manufactured weapons for export to Saudi Arabia and the United Arab Emirates. These two countries are leaders in a conflict that began in 2015, and which is still active today. It is a conflict that has led to a serious humanitarian crisis in Yemen. The companies profiting from the services and financial investments of the Spanish armed bank are: Airbus, Boeing, General Dynamics, Leonardo, Navantia, Raytheon Technologies, Thales and Rheinmetall AG.

The BBVA and Banco Santander are the Spanish banks that allocated the largest amount of financing to the arms companies supplying the main armies involved in the war in Yemen, with 5,231 million dollars

during the 2015-2019 period. Another 17 financial institutions based in Spain also did the same, although to a lesser extent. Noteworthy among these, due to their commercial involvement are Bankia, Bankinter, Banco de Sabadell and Banco Mediolanum.

ETHE CASE OF RAYTHEON TECHNOLOGIES AND THE BOMBING OF THE YEMENI CIVIL POPULATION

Attacks on the civilian population have been a constant throughout the conflict, as the group of experts on Yemen has documented and communicated annually through a report and a letter addressed to the presidency of the United Nations Security Council.

As mentioned in this report, the document sent in January 2017 mentions attacks made with the GBU-12 Paveway models, although the evidence obtained by the group of experts on the ground is reduced to graphic documents, however the specific manufacturing origin cannot be identified from the fragments of these guided bombs. Nonetheless, the document does affirm that only the Saudi-led coalition has the potential to use them.

Our analysis of those exports made to Saudi Arabia and the United Arab Emirates seems to indicate that the projectiles were launched by Saudi Arabia, as the UAE did not request the manufacture of these weapons from Raytheon Technologies until 2017. It should be noted that Raytheon Technologies has been manufacturing this type of material for Saudi Arabia since approximately 2011. The expert group revealed that bombs of the same model were dropped in the attacks on the Hajjah hospital on 15 August and on 8 October in Sana'a (on a civilian funeral) in 2016. In the attack on the hospital, 19 people died and 24 were injured while in the attack on the civilian funeral 32 people lost their lives and 695 were injured. In 2019, Raytheon Technologies received a new order for the manufacture of 50,000 new units of this guided bomb model for Saudi Arabia.

Among the Spanish financial institutions that have invested in shares of Raytheon Technologies are the BBVA, Banco Sabadell and Bankia. According to the data available to us, at least 800 more financial institutions have also invested or granted loans to this company during the period studied. Most prominent among these are large US financial institutions such as Vanguard, BlackRock, State Street, Bank of America, JPMorgan Chase and Morgan Stanley, however we also discovered entities that are also involved with Raytheon Technologies in Europe, such as Credit Agricole, Deutsche Bank and the Norwegian Government Pension Fund.

ANNEXES

Table 1. Countries that Export Arms to Saudi Arabia and the United Arab Emirates

Recipient	Supplier	2015	2016	2017	2018	2019	Total
Saudi Arabia	Germany	2	16	121	140	-	279
	Austria	4	4	-	-	-	8
	Belgium	-	-	-	-	38	38
	Bulgaria	8	1	15	-	-	24
	Canada	111	11	10	46	107	285
	China	35	15	35	40	40	165
	South Korea	-	-	-	3	-	3
	Slovakia	3	3	-	-	-	6
	Spain	208	-	15	70	-	293
	United States	1,774	1,769	3,121	3,202	3,138	13,004
	Finland	7	-	-	-	-	7
	France	161	76	115	197	209	758
	Georgia	-	6	7	-	-	13
	Italy	89	89	48	-	-	226
	Netherlands	25	-	-	-	-	25
	United Kingdom	751	858	425	61	135	2,230
	Rusia	-	-	-	-	6	6
	Serbia	4	11	2	-	-	17
	South Africa	5	4	6	-	-	15
	Sweden	-	1	-	-	-	1
Switzerland	142	44	-	-	-	186	
Turkey	52	39	13	-	-	104	
	Total (Saudi Arabia)	3,381	2,947	3,933	3,759	3,673	17,693
United Arab Emirates	Germany	11	13	29	5	5	63
	Canada	12	7	5	25	35	84
	China	15	15	37	46	12	125
	Denmark	1	1	1	-	-	3
	Spain	-	-	-	-	60	60
	United States	812	659	603	916	383	3,373
	Finland	1	13	-	-	-	14
	France	167	200	181	-	-	548
	Italy	77	8	3	13	13	114
	New Zealand	1	-	-	-	-	1
	Netherlands	-	-	84	84	-	168
	United Kingdom	-	-	-	8	8	16
	Rusia	-	-	-	40	80	120
	Singapore	2	1	-	-	-	3
	South Africa	20	27	14	17	8	86
	Sweden	65	11	10	3	-	89
	Turkey	40	-	-	41	41	122
	Total (UAE)	1,224	955	967	1,198	645	4,989
	Total	4,605	3,902	4,900	4,957	4,318	22,682

In Millions TIV and by recipient country.

Source: Author's own, using the SIPRI database on arms transfers

Key: - unavailable data

Table 2. Arms Exports by Third Countries to Saudi Arabia and UAE 2015-2019

Supplier	Saudi Arabia	United Arab Emirates	Total
Canada	285	84	369
China	165	125	290
South Korea	3	-	3
Georgia	13	-	13
New Zealand	-	1	1
Rusia	6	120	126
Serbia	17	-	17
Singapore	-	3	3
South Africa	15	86	86
Switzerland	186	-	186
Turkey	104	122	226
Total	794	541	1,320

Source: Author's own, using the SIPRI database on arms transfers
Key: - unavailable data

Table 3. Arms Exports by the Member States of the European Union to Saudi Arabia and UAE 2015-2019

Origen	Saudi Arabia	United Arab Emirates	Total general
United Kingdom	2,230	16	2,246
France	758	548	1,306
Spain	293	60	353
Germany	279	63	342
Italy	226	114	340
Netherlands	25	168	193
Sweden	1	89	90
Belgium	38	-	38
Bulgaria	24	-	24
Finland	7	14	21
Austria	8	-	8
Slovakia	6	-	6
Denmark	-	3	3
TOTAL	3,895	1,075	4,970

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data

Table 4. Spanish Exports to Saudi Arabia and the United Arab Emirates

Countries	2015	2016	2017	2018	2019	Total período
Saudi Arabia	545,979,750	116,192,039	270,165,801	235,268,856	35,366,478	1,202,972,924
United Arab Emirates	3,942,910	26,738,862	52,928,202	13,883,509	179,190,699	276,684,182
TOTAL (Annual)	686,318,437	416,733,858	361,312,924	262,072,038	217,810,264	1,994,997,610

In Millions of Euros.
Source: Author's own, using the data provided by the Subdirectorate General for Foreign Trade in Defense Material and Dual Use

Table 5. Spanish Exports to Saudi Arabia by Military Category in Millions of Euros 2015-2019

Cat.	Descripció	2015	2016	2017	2018	2019	2015-2019
1	Weapons of lower calibre 12.70 mm (minimum less than 20mm)	2,140	-	-	-	-	2,140
2	Weapons of superior calibre 12.70 mm (minimum less than 20mm)	-	-	-	991,437	-	991,437
3	Ammunition and devices for the arming of the baits	-	34,780,546	90,117,910	80,345,272	7,064,757	212,308,485
4	Bombs, torpedoes, rockets, missiles	42,063,173	41,200,000	-	9,200,000	827,500	93,290,673
5	Fire management systems	600,000	-	57,000,000	19,226,100	3,873,749	80,699,849
8	Energy materials and related substances	-	-	-	1,700,439	-	1,700,439
10	Aircraft, balloons, parachutes, drones and engines	498,647,443	32,232,315	98,497,699	120,334,111	23,076,175	772,787,743
11	Electronic equipment, vehicle space and components	465,000	4,229,178	1,429,791	235,232	-	6,359,201
15	Training teams image or countermeasure	4,201,994	-	23,120,401	3,236,265	524,297	31,082,957
22	Technology	-	3,750,000	-	-	-	3,750,000
	Total	545,979,750	116,192,039	270,165,801	235,268,856	35,366,478	1,202,972,924

Source: Author's own, using the data provided by the Subdirectorate General for Foreign Trade in Defense Material and Dual Use
Key: - unavailable data

Table 6. Spanish Exports to the United Arab Emirates by Military Category in Millions of Euros 2015-2019

Cat.	Description	2015	2016	2017	2018	2019	2015-2019
3	Ammunition, devices and components	-	5,572,266	27,381,091	2,470,680	9,488,693	44,912,730
4	Bombs, torpedoes, rockets, missiles	-	-	15,251,360	-	-	15,251,360
6	Ground vehicles and components	-	-	-	-	75,216	75,216
10	Aircraft, unmanned airborne vehicles, parachutes, engines	3,942,910	21,166,596	10,295,751	11,412,829	160,241,508	207,059,594
11	Electronic equipment	-	-	-	-	9,100,000	9,100,000
22	Technology	-	-	-	-	285,282	285,282
	TOTAL	3,942,910	26,738,862	52,928,202	13,883,509	169,702,006	267,195,489

Source: Author's own, using the data provided by the Subdirectorate General for Foreign Trade in Defense Material and Dual Use
Key: - unavailable data

Table 7. World Exports by Category: Armoured Vehicles (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
	Austria	[50]	MMV	Achleitner Products	Armoured Personnel Carrier	2014	2015-2016	[50]
	Bulgaria	24	BTR-60P	Gorkovskiy Avtomobilny Zavod (USSR)	Armoured Personnel Carrier	2016	2016-2017	24
		724	Piranha	General Dynamics Land Systems Canada	Armoured Personnel Carrier	2009	2011-2015	[724]
		155	Piranha	General Dynamics Land Systems Canada	Armoured Personnel Carrier	2011	2015	[155]
		[70]	Gurkha	Terradyne Armored Vehicles Inc	Armoured Patrol Vehicle	2013	2014-2016	[70]
		385	LAV-700	General Dynamics Land Systems Canada	Armoured Personnel Carrier	2014	2018-2019	[180]
	Canada	119	LAV-700 AT	General Dynamics Land Systems Canada	Tank destroyer	2014	2019	[25]
		119	LAV-700 FSV	General Dynamics Land Systems Canada	Armoured Fire Support Vehicle	2014	2019	[25]
		119	LAV-700 IFV	General Dynamics Land Systems Canada	Infantry Fighting Vehicle	2014	2019	[25]
		[89]	Gurkha	Terradyne Armored Vehicles Inc	Armoured Patrol Vehicle	[2016]	2017-2018	[89]
		[73]	Aravis	Nexter Systems	Armoured Personnel Carrier	2011	2013-2015	[73]
		191	Aravis	Nexter Systems	Armoured Personnel Carrier	2012	2015-2016	[191]
		[500]	ARIVE	Soframe	Armoured Personnel Carrier	[2013]	2016-2018	[500]
	France	[71]	Bastion	ACMAT	Armoured Personnel Carrier/ Armoured Patrol Vehicle	[2015]	2016	[71]
		100	Sherpa	Renault Truck Defense	Armoured Patrol Vehicle	2016	2016-2017	[100]
		100	VAB-VCI	GIAT Industries/ Nexter	Infantry Fighting Vehicle	2016	2018-2019	[100]
	Georgia	100	Didgori	Scientific Technical Center Delta	Armoured Patrol Vehicle	2015	2016-2017	[100]
	South Africa	60	LM13	LMT Technologies	Armoured Personnel Carrier/ Armoured Patrol Vehicle	2014	2015-2017	[60]
		[10]	Casspir-6	Denel Mechem	Armoured Personnel Carrier	[2016]	2016-2017	[10]
		[320]	M-113A300	FNSS Defence Systems Inc	Armoured Personnel Carrier	2011	2013-2015	[320]
	Turkey	[350]	M-113A300	FNSS Defence Systems Inc	Armoured Personnel Carrier	[2013]	2015-2017	[350]
		[314]	M-1A25	General Dynamics	Tank	2009	2012-2017	[314]
		[534]	M-ATV	Oshkosh Defense	Armoured Patrol Vehicle	2013	2014-2016	[534]
	United States	[1.325]	M-ATV	Oshkosh Defense	Armoured Patrol Vehicle	[2015]	2016-2017	[1.325]
		[153]	M-1A25	General Dynamics	Tank	2016	2018-2019	[140]
		[20]	M-88AZ HERCULES	BAE Systems	Armoured Recovery Vehicle	[2016]	2018-2019	[20]

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
United Arab Emirates	Finland	40	AMV	Patria Land Oy	Armoured Personnel Carrier	2016	2016	40
	Germany	4	Wisent-2	FFG	Armoured Engineer Vehicle/ Armoured Recovery vehicle	2014	2016-2017	[4]
	South Africa	72	RG-31 Nyala	Bae Systems	Armoured Personnel Carrier	2011	2013-2015	[72]
		[56]	Mamba	Denel Dynamics	Armoured Personnel Carrier	2013	2013-2015	[56]
	Turkey	100	N35	Nimr	Armoured Personnel Carrier	2015	2016-2019	[100]
		24	RG-31 Nyala	Bae Systems	Armoured Personnel Carrier	2015	2016	[24]
	United States	[400]	Rabdan	AlJasoor	Infantry Fighting Vehicle	2017	2018-2019	[100]
		542	Caiman	Bae Systems	Armoured Personnel Carrier	2014	2016-2018	[542]
	United States	[44]	M-ATV	Oshkosh Defense	Armoured Patrol Vehicle	2014	2016	[44]
		[1,085]	MaxxPro	Navistar Defense	Armoured Personnel Carrier	2014	2017-2018	[1,085]
		[1,312]	MaxxPro	Navistar Defense	Armoured Personnel Carrier	2014	2016-2019	[1,312]

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 8. World Exports by Category: Engines (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered	
Saudi Arabia	Canada	[55]	PT6	Pratt & Whitney Canada	Turboprop/Turboshaft	2012	2014-2016	[55]	
		[8]	PW100	Pratt & Whitney Canada	Turboprop/Turboshaft	2015	2015-2018	8	
	Germany	[191]	OM-924	Mercedes-Benz	Diesel engine	2012	2015-2016	[191]	
		[500]	OM-926	Mercedes-Benz	Diesel engine	[2013]	2016-2018	[500]	
	Sweden	[24]	OM-366	Mercedes-Benz	Diesel engine	2018	2018	[24]	
		71	MD5	-	Diesel engine	[2015]	2016	[71]	
	United Kingdom	Rolls-Royce	8	MT-30	Rolls-Royce	Gas turbine	2017	-	-
			[724]	6V-53	Detroit Diesel Corporation	Diesel engine	2009	2011-2015	[724]
		GE Aviation	[6]	CF6/F-103	GE Aviation	Turbofan	2009	2014-2015	[6]
			[670]	6V-53	Detroit Diesel Corporation	Diesel engine	2011	2013-2017	[670]
United States		[155]	6V-53	Detroit Diesel Corporation	Diesel engine	2011	2015	[155]	
		[25]	F110	GE Aviation	Turbofan	[2012]	2017-2019	[25]	
United Arab Emirates	Canada	[742]	CT3	Caterpillar	Diesel engine	2014	-	-	
		[60]	VT-400	Cummins Engine Company Inc	Diesel engine	2014	2015-2017	[60]	
	Canada	[24]	PT6	Pratt & Whitney Canada	Turboprop/Turboshaft	2014	2015-2017	[24]	
		10	PW100	Pratt & Whitney Canada	Turboprop/Turboshaft	2017	2019	[10]	
	Germany	[24]	PT6	Pratt & Whitney Canada	Turboprop/Turboshaft	2019	-	-	
		[24]	MTU-595	IMS	Diesel engine	[2003]	2011-2017	24	
	Germany	[24]	MTU-2000	Rolls-Royce	Diesel engine	2009	2013-2015	[24]	
		4	BR-710	Rolls-Royce	Turbofan	[2012]	2018-2019	4	
		8	MTU-4000	Rolls-Royce	Diesel engine	2013	2017	8	
		4	BR-710	Rolls-Royce	Turbofan	2015	-	-	
Sweden	Rolls-Royce	2	BR-710	Rolls-Royce	Turbofan	2017	-	-	
		[40]	DI-12	SCANIA	Diesel engine	2016	2016	40	
United States	Cummins Engine Company Inc	[100]	ISB4	Cummins Engine Company Inc	Diesel engine	2015	2016-2019	[100]	
		[400]	C-9	Caterpillar	Diesel engine	2017	2018-2019	[100]	

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 9. World Exports by Category: Missiles (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered	
Saudi Arabia	Bulgaria	[2,200]	9M111 fagot/at-4	Kbp instrument design bureau	Anti-tank missile	2015	2015-2017	[2,200]	
		[800]	Mistral	Mbda missile systems	Portable Surface-to-Air Missile	2011	2013-2015	[800]	
	France	[250]	Mica	Mbda missile systems	Beyond Visual Range Air-to-Air Missile	2013	2018-2019	[250]	
		[130]	Mistral	Mbda missile systems	Portable Surface-to-Air Missile	2013	2016-2017	[130]	
	South Korea	[100]	Raybolt	Lig nex1	Anti-tank missile	[2017]	2018	[100]	
		-	Grom-2	Yuzhnoye design office	Surface-to-Surface missile	2016	-	-	
	United Kingdom	Ukraine	[2,400]	Paveway-4	Raytheon Technologies	Guided bomb	2013	2015	[2,400]
			[100]	Storm shadow/scalp	Mbda missile systems	Air-to-Surface Missile	2013	2016-2017	[100]
		[1,000]	Brimstone	Mbda missile systems	Air-to-Surface Missile	[2015]	2016-2019	[1,000]	
		-	Meteor	Mbda systems	Beyond Visual Range Air-to-Air Missile	[2015]	2018	[20]	
[600]		Agm-88 harm	Raytheon Technologies	Anti-radiation missile	[2011]	2018-2019	[200]		
[300]		Aim-9x sidewinder	Raytheon Technologies	Short Range Air-to-Air Missile	[2011]	2012-2019	[300]		
[3,100]		Paveway (1,100 Gbu-24 paveway-3 y 2,000 Paveway dual)	Raytheon Technologies	Guided bomb	[2011]	2013-2016	[3,100]		
600		Jdam (gbu-31b)	Boeing	Guided bomb	2012	2016	[600]		
[400]		Rgm-84l harpoon-2	Boeing	Anti-ship Missile/Surface-to-Surface Missile	[2012]	2016-2018	[220]		
[650]		Agm-84h slammer	Boeing	Air-to-Surface Missile	[2013]				
United States	[500]	Aim-120c amraam	Raytheon Technologies	Beyond Visual Range Air-to-Air Missile	2013	2015-2019	[500]		
	[1,300]	Cbu-97 sfw	Textron	Guided bomb	2013	2014-2015	[1,300]		
	1000	Gbu-39 sdb	Boeing	Guided bomb	[2013]	2017-2019	[600]		
	[2,176]	Agm-114l hellfire	Lockheed martin	Anti-tank missile	2014	2015-2016	[2,176]		
	[355]	Agm-154 jsow	Raytheon Technologies	Guided bomb	2014	2016-2018	[355]		
	[4,941]	Bgm-71ftow-2b	Raytheon Technologies	Anti-tank missile	[2014]	2015-2018	[4,941]		

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia (cont.)		[10.747]	Bgm-71 tow	Raytheon Technologies	Anti-tank missile	2014	2015-2018	[10.747]
		[320]	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2015	2017-2019	[320]
		[8.120]	Paveway	Raytheon Technologies	Guided bomb	2015	2016-2017	[8.120]
		[2.645]	Jdam (gbu-31, gbu-38, gbu-54 y gbu-56)	Boeing	Guided bomb	2016	2018	[2.645]
		618	Agm-154 jslow	Raytheon Technologies	Guided bomb	2017	2019	[175]
		[45.000]	Jdam (gbu-31, gbu-38)	Boeing	Guided bomb	[2017]	-	-
		[100]	Rim-116a ram	Raytheon Technologies	Surface-to-Air Missile	[2017]	-	-
		[200]	Rim-162 essm	Raytheon Technologies	Surface-to-Air Missile	[2017]	-	-
		-	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2018	-	-
		-	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2018	-	-
		-	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2018	-	-
		[360]	Thaad missile	Lockheed martin	Anti-Ballistic Missile	2018	-	-
		[59.000]	Paveway	Raytheon Technologies	Guided bomb	[2019]	-	-
		-	Wgu-59 apkws	Bae systems	Air-to-Surface Missile	[2019]	-	-
United Arab Emirates	China	[500]	Blue arrow-7	Norinco	Anti-tank missile	2017	2017-2019	[350]
	France	[150]	Mim-40-3 exocet	Mbda	Anti-ship Missile/Surface-to-Surface Missile	2006	2010-2017	[150]
		[30]	Mim-40-3 exocet	Mbda	Anti-ship Missile/Surface-to-Surface Missile	[2019]	-	-
	Italy	[100]	Marte-2	Mbda	Anti-ship missile	2009	2013-2015	[100]
		[50]	Marte-2	Mbda	Anti-ship missile	2017	2018-2019	[50]
	Rusia	5	Kornet/at-14	Degtyarev; kbp instrument design bureau	Anti-tank missile	2017	2018-2019	[3.000]
	Serbia	-	Alas-c	Edepro	Anti-ship missile	[2013]	-	-
		[1.420]	Al-tariq	Tawazun dynamics y denel dynamics	Air-to-Surface Missile	2011	2015-2018	[1.420]
	South Africa	4000	Sejeel	Tawazun dynamics y denel dynamics	Guided bomb	2015	-	-
	Turkey	[1.000]	Al-tariq	Tawazun dynamics y denel dynamics	Air-to-Surface Missile	2015	2018-2019	[400]
	[2.000]	Cirit	Roketsan	Air-to-Surface Missile	[2013]	2013-2015	[2.000]	

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
United Arab Emirates (cont.)	United States	[96]	Rim-162 essm	Raytheon Technologies	Surface-to-Air Missile	2006	2015	[96]
		[200]	Rim-116a ram	Raytheon Technologies	Surface-to-Air Missile	2007	2011-2016	[200]
		192	Thaad missile	Lockheed martin	Anti-Ballistic Missile	2012	2015-2019	[192]
		[2.000]	Talon	Raytheon Technologies	Air-to-Surface Missile	2013	2015-2018	[2.000]
		[5.000]	Gbu-39 sdb	Boeing	Guided bomb	[2014]	2015-2019	[5.000]
		3.600	Jdam	Boeing	Guided bomb	2014	2015-2016	[3.600]
		390	Gmlrs	Lockheed martin	Guided rocket	2015	2017	[390]
		124	Mgm-140b atacms	Lockheed martin	Surface-to-Surface Missile	2015	2017-2018	[124]
		[3.504]	Jdam (gbu-31)	Boeing	Guided bomb	[2016]	2017-2018	[3.504]
		[25]	Rim-116a ram	Raytheon Technologies	Surface-to-Air Missile	[2016]	2018	[25]
		[96]	Rim-162 essm	Raytheon Technologies	Surface-to-Air Missile	2016	2018-2019	[96]
		[1.000]	Agm-114k hellfire	Lockheed martin	Anti-tank missile	2017	2018	[1.000]
		1.500	Jdam	Boeing	Guided bomb	2017	2018	[1.500]
		100	Mim-104c pac-2	Raytheon Technologies	Surface-to-Air Missile	2017	2019	[100]
		[13.640]	Paveway	Raytheon Technologies	Guided bomb	2017	2018-2019	[6.000]
		300	Aim-9x sidewinder	Raytheon Technologies	Short Range Air-to-Air Missile	2018	2019	[100]
		[60]	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2019	-	-
		[452]	Mim-104f pac-3	Lockheed martin	Anti-Ballistic Missile	2019	-	-
		-	Rim-162 essm block-2	Raytheon Technologies	Surface-to-Air Missile	[2019]	-	-

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 10. World Exports by Category: Aircraft (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	China	[5]	CH-4	China Aerospace Science y Technology Corporation (CASC)	Armed Unmanned Aerial Vehicle	[2014]	2015	[5]
		[15]	Wing Loong-1	Chengdu Aircraft Industry Group	Armed Unmanned Aerial Vehicle	[2014]	2015-2017	[15]
		[50]	Wing Loong-2	Chengdu Aircraft Industry Group	Armed Unmanned Aerial Vehicle	2017	2017-2019	[25]
	Germany	23	EC145	Airbus Helicopters	Light helicopter	2016	2017-2018	[23]
		3	A-330 MRTT	Airbus	Tanker/transport aircraft	2009	2014-2015	3
	Spain	2	C-295	Airbus	Transport aircraft	2015	2015-2017	2
		2	C-295MIPA	Airbus	Maritime Patrol aircraft	2015	2018	2
	Switzerland	55	PC-21	Pilatus Aircraft	Trainer aircraft	2012	2014-2016	55
		24	Typhoon Block-20	MBDA Systems y Eurofighter	Fighter/ground attack aircraft	2007	2015-2017	24
	United Kingdom	48	Typhoon Block-8	MBDA Systems y Eurofighter	Fighter/ground attack aircraft	2007	2009-2015	[48]
	22	Hawk-100	BAE Systems	Trainer/combat aircraft	2012	2016-2017	22	
	22	Hawk-100	BAE Systems	Trainer/combat aircraft	2015	2019	[9]	
	12	AH-64E Apache Guardian	Boeing	Combat helicopter	[2009]	2014-2015	[12]	
	[24]	AH-64E Apache Guardian	Boeing	Combat helicopter	[2011]	2015-2016	[24]	
	84	F-15 Advanced Eagle	Boeing	Fighter/ground attack aircraft	2011	2016-2019	[84]	
	70	F-15 Advanced Eagle	Boeing	Fighter/ground attack aircraft	2011	2016	2	
	12	AH-64E Apache Guardian	Boeing	Combat helicopter	[2012]	2015	[12]	
United States		4	King Air-350 ISR	Beechcraft	Airborne ground surveillance aircraft	[2012]	2015-2016	[4]
		24	S-70/UH-60L	Sikorsky	Helicopter	2012	2014-2015	[24]
		2	KC-130J Hercules	Lockheed Martin	Tanker/transport aircraft	2013	2016	2
		24	AH-65	Boeing	Combat helicopter	2014	2016-2018	[24]
		10	MH-60R Seahawk	Sikorsky	Anti-Submarine Warfare helicopter	2015	2018-2019	[10]
		[2]	King Air-350 ISR	Beechcraft	Airborne ground surveillance aircraft	2016	2019	[1]
		8	S-70/UH-60L	Sikorsky	Helicopter	2016	2017	[8]

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered	
Saudi Arabia (cont.)	United States (cont.)	24	AH-64E Apache Guardian	Boeing	Combat helicopter	2017	-	-	
		8	CH-47F Chinook	Boeing	Transport helicopter	2017	-	-	
		40	S-70/UH-60L	Sikorsky	Helicopter	2017	2018-2019	[20]	
		[30]	S-70/UH-60L	Sikorsky	Helicopter	[2017]	-	-	
	Brazil	24	B-250	Calidus LLC	Trainer/combat aircraft	2019	-	-	
			[10]	DHC-6 Twin Otter	Viking Air	Transport aircraft	2008	2013-2015	[10]
		Canada	2	Global Express	Bombardier Aviation	Transport aircraft	[2012]	2018-2019	2
			2	Global Express	Bombardier Aviation	Transport aircraft	2015	-	-
			1	Global Express	Bombardier Aviation	Transport aircraft	2017	-	-
			[2]	Challenger-650	Bombardier Aviation	Light transport aircraft	2019	-	-
United Arab Emirates	China	2	Global Express	Bombardier Aviation	Transport aircraft	2019	-	-	
		[25]	Wing Loong-1	Chengdu Aircraft Industry Group	Armed Unmanned Aerial Vehicle	[2011]	2013-2017	[25]	
	Italy	[15]	Wing Loong-2	Chengdu Aircraft Industry Group	Armed Unmanned Aerial Vehicle	2017	2017-2018	[15]	
		[9]	AW139	Bell/Agusta Aerospace	Helicopter	2015	2015	[9]	
	New Zealand	1	P-750	Pacific Aerospace	Light transport aircraft	2014	2015	1	
		-	Seeker-200	Denel Dynamics	Unmanned Aerial Vehicle	2017	-	-	
	South Africa	6	Seeker-400	Denel Dynamics	Armed Unmanned Aerial Vehicle	2018	-	-	
		5	C-295	Airbus	Transport aircraft	2017	2019	[5]	
	Spain	3	A-330 MRTT	Airbus	Tanker/transport aircraft	2019	-	-	
		[12]	CH-47F Chinook	Boeing	Transport helicopter	2011	2012-2015	[12]	
United States	30	Bell-407	Bell Helicopter	Light helicopter	[2013]	2014-2016	[30]		
		24	Archangel-BPA	lomag	Ground attack aircraft	2014	2015-2017	[24]	
	[10]	RQ-1 Predator	General Atomics	Unmanned Aerial Vehicle	[2014]	2017	[10]		
	17	C-17A Globemaster-3	Boeing	Heavy transport aircraft	2015	2015	2		
			AH-64E Apache Guardian	Boeing	Combat helicopter	2018	-	-	

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 11. World Exports by Category: Ships (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	France	39	HSI-32	CMN Group	Patrol craft	2018	2019	3
		3	Combattante FS-56	CMN	Fast Attack Craft	[2016]	-	-
	Germany	33	FPB-40	-	Patrol craft	2014	2016-2018	15
		2	IPV-60	-	Offshore Patrol Vessel	2015	-	-
		5	Avante-2200	Navantia	Corvette	2018	-	-
United Arab Emirates	United States	4	MIMSC	Lockheed Martin	Frigate	2017	-	-
		4	Baynunah	CMN Group	Corvette	2003	2011-2015	4
	France	2	Baynunah	CMN Group	Corvette	2005	2016-2017	2
		2	Gowind - 2500	Naval Group	Frigate	2019	-	-
		2	FOPV-850	Damen	Corvette	2013	2017-2018	2
Sweden	12	Channatha	Swede Ship	Fast Attack Craft	2009	2013-2015	[12]	

Source: Author's own, using the SIPRI database on arms transfers.

Key: - unavailable data / [] unconfirmed or SIPRI estimates.1

Table 12. World Exports by Category: Artillery (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	Finland	36	NEMO 120mm	Patria Land Oy	Mortar turret	[2011]	2012-2015	[36]
	France	32	CAESAR 155mm	Nexter Systems	Self-propelled gun	2011	2013-2015	[32]
		[42]	LG-1105mm	Nexter Systems	Towed gun	[2017]	2018	[42]
	Russia	24	CAESAR 155mm	Nexter Systems	Self-propelled gun	2018	2018	[24]
			TOS-1	Omsktransmash	Self-propelled Multiple Rocket Launcher	[2017]	2019	[5]
	Serbia	[5]	M-63 Plamen 128mm	Yugoimport SDPR	Towed Multiple Rocket Launcher	2015	2015	[5]
	Slovakia	[847]	UBM-52 120mm	PPT Namenska	Mortar	[2015]	2015-2017	[847]
		[36]	BM-21 Grad 122mm	NPO Splav	Self-propelled Multiple Rocket Launcher	[2012]	2013-2016	36
	Spain	[100]	Alakran 120mm	New Technologies Global Systems (NTGS)	Self-propelled mortar	2016	2017-2018	[100]
	China	[6]	AH-4 155mm	Norinco	Towed gun	[2018]	2019	[6]
		SR-5	Norinco	Self-propelled Multiple Rocket Launcher	[2018]	-	-	
United Arab Emirates	Finland	6	NEMO 120mm	Patria Land Oy	Mortar turret	2009	2013-2015	[6]
	Singapore	[72]	SRAMS 120mm	ST Engineering Land Systems	Mortar	2011	2013-2015	[72]
		24	SRAMS 120mm	ST Engineering Land Systems	Mortar	2015	2016	24
United States	12	M-142 HIMARS	Lockheed Martin	Self-propelled Multiple Rocket Launcher	2015	2018	12	

Source: Author's own, using the SIPRI database on arms transfers.

Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 13. World Exports by Category: Air Defence Systems (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	France	[49]	MPCV	MBDA Missile Systems	Mobile air defense system	2011	2013-2015	[49]
		[5]	VL-MICA	MBDA Missile Systems	Surface-to-Air missile system	2013	2018-2019	[5]
	21	Patriot PAC-3	Raytheon Technologies	Surface-to-Air/Anti-ballistic missile system	2011	2014-2017	[21]	
United Arab Emirates	United States	[3]	Patriot PAC-3	Raytheon Technologies	Surface-to-Air/Anti-ballistic missile system	2015	2017-2019	[3]
		[7]	THAAD	Lockheed Martin	Anti-ballistic missile system	2018	-	-
	2	THAAD	Lockheed Martin	Anti-ballistic missile system	2011	2015-2016	[2]	
	-	Patriot PAC-3	Raytheon Technologies	Surface-to-Air/Anti-ballistic missile system	2018	-	-	

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.¹

Table 14. World Exports by Category: Sensors (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	France	[60]	Damocles	Thales Group	Aircraft Electro-Optical system+G7:C35	[2007]	2009-2017	[60]
		[20]	Ground Master-60	Thales Group	Air search radar	2011	2013-2015	[20]
	Germany	[4]	COBRA	Thales Group	Artillery locating radar	[2014]	2019	[4]
		[10]	FLASH	Thales Group	Anti-submarine Warfare sonar	2015	2018-2019	[10]
	Italy	4	TRS-4D	Hensoldt	Multifunction radar	[2017]	-	-
		26	X-TAR	RheinmetallAG	Air search radar	2011	2015-2016	[26]
		2	RAT-315	Leonardo	Air search radar	2013	2015	[2]
		6	RAT-315	Leonardo	Air search radar	2016	2016-2017	[6]
	Netherlands	[225]	SQUIRE	Thales Group	Ground surveillance radar	2009	2011-2015	[225]
		[37]	APG-78 Longbow	Lockheed Martin	Combat helicopter radar	[2010]	2014-2016	[37]
United States	[193]	AAQ-13 LANTIRN	Lockheed Martin	Combat aircraft radar	[2011]	2016-2019	[94]	
	[158]	AAQ-33 Sniper	Lockheed Martin	Aircraft Electro-Optical system	2012	2016-2019	[82]	
	[10]	DB-110	Goodrich	Aircraft reconnaissance system	2012	2014-2016	[10]	
	[10]	PTDS	Lockheed Martin	Airborne Ground Surveillance Aerostate	2017	-	-	
	6	Scanter-2001	Terma	Sea search radar	2004	2011-2017	6	
Denmark	17	Ground Master-200	Thales Group	Air search radar	2013	2015-2017	[17]	
	3	COBRA	Thales Group	Artillery locating radar	2019	-	-	
France	-	RDY	Thales Group	Combat aircraft radar	2019	-	-	
	6	Orion RTN-25X	Leonardo	Fire control radar	2004	2011-2017	6	
	6	Giraffe AMB	SAAB	Air search radar	2004	2011-2017	6	
	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
Italy	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
	1	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2017	-	-	
Sweden	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
	1	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2017	-	-	
United Arab Emirates	Denmark	6	Scanter-2001	Terma	Sea search radar	2004	2011-2017	6
		17	Ground Master-200	Thales Group	Air search radar	2013	2015-2017	[17]
	3	COBRA	Thales Group	Artillery locating radar	2019	-	-	
	-	RDY	Thales Group	Combat aircraft radar	2019	-	-	
	6	Orion RTN-25X	Leonardo	Fire control radar	2004	2011-2017	6	
	6	Giraffe AMB	SAAB	Air search radar	2004	2011-2017	6	
United Arab Emirates	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2015	-	-	
	1	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2017	-	-	

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
United Arab Emirates (cont.)	Sweden (cont.)	2	Erieye SRSS	SAAB	Airborne Early Warning & Control/ Ground Surveillance System	2019	-	-
	Serbia	-	ALAS	EdePro	Coast defence system	[2013]	-	-
	United Kingdom	2	AS-5	QinetiQ	Signals intelligence system	[2009]	2018-2019	2
		2	Seaspray	Leonardo Company	Maritime patrol aircraft radar	2015	-	-
	1	Seaspray	Leonardo Company	Maritime patrol aircraft radar	2017	-	-	
United States		2	DB-110	Goodrich	Aircraft reconnaissance system	[2017]	2018-2019	2

Source: Author's own, using the SIPRI database on arms transfers.

Key: - unavailable data / [] unconfirmed or SIPRI estimates. |

Table 15. World Exports by Category: Satellites (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
United Arab Emirates	France	2	Helios-2	Airbus y Thales Group	Reconnaissance Satellite	2015	-	-

Source: Author's own, using the SIPRI database on arms transfers.

Key: - unavailable data / [] unconfirmed or SIPRI estimates. |

Table 16. World Exports by Category: Naval Weapons (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia		3	Super Rapid 76mm	Leonardo	Naval gun	2015	-	-
	Italy	[4]	Super Rapid 76mm	Leonardo	Naval gun	[2017]	-	-
		5	Super Rapid 76mm	Leonardo	Naval gun	[2018]	-	-
	Switzerland	5	GDM-008 35mm	Rheinmetall AG	Close-in Weapon System	2018	-	-
	United States	5	Mk-41	Raytheon Technologies	Naval Surface-to-Air missile system	[2018]	-	-
United Arab Emirates		6	Super Rapid 76mm	Leonardo	Naval gun	[2003]	2012-2016	6
	Italy	2	Super Rapid 76mm	Leonardo	Naval gun	[2019]	-	-
	Sweden	2	SAK-70 Mk-2 57mm	Bae Systems	Naval gun	2015	2017-2018	2
	United States	2	Mk-48 GMVLS	Raytheon Technologies	Naval Surface-to-Air missile system	[2019]	-	-

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 17. World Exports by Category: Others (2015-2019)

Recipient	Supplier	Ordered	Designation	Manufacturer Company	Weapon Description	Year of Order	Year of Delivery	Delivered
Saudi Arabia	Belgium	119	Cockerill-3105 105mm	John Cockerill	Tank turret	2014	2019	[25]
		[119]	MCT	Kongsberg Defence & Aerospace	Infantry Fighting Vehicle turret	2014	2019	[25]
	United Kingdom	3	Sistema de reabastecimiento en vuelo	-	Air refuel system	2009	2014-2015	[3]
United Arab Emirates	United States	264	LAV-25 turret	-	Infantry Fighting Vehicle turret	[2009]	2011-2015	[264]
	Australia	-	R-4005	Electro Optic Systems	Infantry Fighting Vehicle turret	2019	-	-

Source: Author's own, using the SIPRI database on arms transfers.
Key: - unavailable data / [] unconfirmed or SIPRI estimates.

Table 18. SIPRI ranking of major arms dealers

Position in the ranking of SIPRI	Arms company	Country of origin	Sales 2019 (in millions of USD)
1	Lockheed Martin	United States	53.230
2	Boeing	United States	33.580
4	Raytheon	United States	25.320
5	General Dynamics	United States	24.500
7	BAE Systems	United Kingdom	22.240
9	Norinco	China	14.540
11	United Technologies Corp. (forma parte de Raytheon des de 2019)	United States	13.100
12	Leonardo	Italy	11.110
13	Airbus	Trans-european	11.050
14	Thales Group	France	9.470
23	Rolls-Royce	United Kingdom	4.710

Source: Authors' own - SIPRI data

Table 19. Ranking of the Financial Institutions that financed the 15 Companies that Exported Arms to Saudi Arabia Saudi and EAU (2015-2019)

	Financial entity	Country	Total (USD)
1	Capital Group	United States	\$55,011,957,948.60
2	Vanguard	United States	\$52,228,706,297.34
3	BlackRock	United States	\$47,994,161,101.63
4	State Street	United States	\$43,213,287,879.38
5	Verisight	United States	\$28,171,353,784.56
6	T.Rowe Price	United States	\$27,971,795,429.46
7	Bank of America	United States	\$19,809,312,454.48
8	JPMorgan Chase	United States	\$15,827,361,595.30
9	Wells Fargo	United States	\$11,994,612,912.59
10	Citigroup	United States	\$10,309,044,571.94
11	Fidelity Investments	United States	\$9,855,164,917.09
12	TIAA	United States	\$7,307,040,708.00
13	Prudential Financial (US)	United States	\$7,163,008,227.88
14	Crédit Agricole	France	\$6,466,695,648.52
15	Goldman Sachs	United States	\$6,390,120,424.80
16	Société Générale	France	\$6,336,660,312.37
17	Morgan Stanley	United States	\$6,290,332,595.26
18	Mitsubishi UFJ Financial	Japan	\$6,061,637,938.03
19	Royal Bank of Canada	Canada	\$6,036,282,186.03
20	UBS	Switzerland	\$5,367,987,794.57
21	Lloyds Banking Group	United Kingdom	\$3,941,155,167.11
22	Deutsche Bank	Germany	\$4,842,716,573.93
23	Invesco	United States	\$3,696,952,486.05
24	Banco Bilbao Vizcaya Argentaria (BBVA)	Spain	\$3,401,309,592.96
25	Sociedad Estatal de Participaciones Industriales	Spain	\$3,219,035,811.99
26	Barclays	United Kingdom	\$3,134,877,622.04
27	BPCE Group	France	\$3,040,715,157.71
28	Toronto-Dominion Bank	Canada	\$2,874,138,508.10
29	BNP Paribas	France	\$2,957,391,205.27
30	US Bancorp	United States	\$2,769,068,760.06
31	Legal & General	United Kingdom	\$2,639,027,291.51
32	AXA Equitable	United States	\$2,572,015,823.83
33	MassMutual Financial	United States	\$2,140,017,994.42
34	Sumitomo Mitsui Trust	Japan	\$2,066,441,945.42
35	HSBC	Switzerland	\$1,837,119,091.93
36	Santander	Spain	\$1,830,195,192.39
37	Commerzbank	Germany	\$1,665,954,291.92
38	AXA	France	\$1,437,670,732.60
39	Sun Life Financial	Canada	\$1,422,799,867.48
40	Norwegian Government Pension Fund - Global	Norway	\$1,385,642,194.29
41	New York Life Insurance	United States	\$1,324,997,744.31
42	New York State Common Retirement Fund	United States	\$1,237,614,161.60
43	European Investment Bank	Europe	\$1,210,811,251.60
44	State Farm	United States	\$1,077,239,000.00
45	Allianz	Germany	\$1,044,873,386.19

	Financial entity	Country	Total (USD)
46	Northwestern Mutual Life Insurance	United States	\$989,237,806.85
47	China Construction Bank	China	\$949,700,000.00
48	China Merchants Group	China	\$939,900,000.00
49	Bank of China	China	\$887,015,722.71
50	Credit Suisse	Switzerland	\$805,982,615.37
51	Allstate	United States	\$750,470,156.22
52	Prudential (UK)	United Kingdom	\$715,612,691.18
53	American International Group (AIG)	United States	\$712,490,063.52
54	MetLife	United States	\$630,178,952.86
55	Old Mutual	United Kingdom	\$615,441,261.01
56	UniCredit	Italy	\$1,344,939,358.88
57	Travelers	United States	\$531,931,000.00
58	Westpac	Australia	\$115,141,533.97
59	Manulife Financial	Canada	\$477,521,517.29
60	Nationwide Mutual Insurance	United States	\$441,324,000.00
61	Intesa Sanpaolo	Italy	\$436,621,036.67
62	Aegon	Netherlands	\$423,909,102.14
63	Industrial and Comercial Bank of China	China	\$408,823,583.73
64	State Bank of India	India	\$385,948,858.07
65	Capital One Financial	United States	\$377,208,220.43
66	CITIC	China	\$336,600,000.00
67	Liberty Mutual Insurance	United States	\$345,413,000.00
68	White Mountains Insurance	United States	\$303,493,000.00
69	KB Financial Group	South Korea	\$275,930,334.73
70	American Family	United States	\$271,635,000.00
71	Commonwealth Bank of Australia	Australia	\$248,021,310.83
72	California Public Employees' Retirement System	United States	\$192,686,488.63
73	Dai-ichi Life Insurance Company	Japan	\$182,652,746.18
74	The Hartford	United States	\$164,442,920.60
75	American United Mutual Insurance	United States	\$159,756,000.00
76	American Equity Investment Life Holding	United States	\$155,351,000.00
77	Aviva	United Kingdom	\$153,838,340.38
78	Bank of Communicatons	China	\$152,800,000.00
79	M&G	United Kingdom	\$147,053,134.68
80	DZ Bank	Germany	\$141,587,517.40
81	National Western Life Group	United States	\$126,900,000.00
82	ING Group	Netherlands	\$118,551,316.17
83	Guardian Life Insurance Company of America	United States	\$118,500,000.00
84	Royal London Group	United Kingdom	\$115,457,257.11
85	California State Teachers' Retirement System (CalSTRS)	United States	\$110,854,956.29
86	Public Employees' Retirement Association of Colorado	United States	\$107,099,728.62
87	State Fund	United States	\$91,954,000.00

	Financial entity	Country	Total (USD)
88	New York State Teachers' Retirement System	United States	\$86,872,940.38
89	Anima	Italy	\$84,335,026.26
90	Ping An Insurance Group	Canada	\$75,800,000.00
91	China Everbright Group	China	\$73,700,000.00
92	UBI Banca	Italy	\$67,957,727.27
93	Bankinter	Spain	\$66,641,500.00
94	Bankia (includes Banco financiero de Ahorro)	Spain	\$66,641,500.00
95	National Pension Service	South Korea	\$65,800,000.00
96	White Mountains Insurance (Bermuda)	Bermuda	\$64,180,000.00
97	Banco de Sabadell	Spain	\$53,549,484.99
98	Virginia retirement system	United States	\$52,363,111.00
99	American National Insurance	United States	\$50,095,000.00
100	Ohio Public Employees Retirement System	United States	\$46,359,312.05
101	Banco Mediolanum	Spain	\$44,356,184.30
102	National Life Group	United States	\$41,430,000.00
103	People's Insurance Company	Canada	\$39,600,000.00
104	Penn Mutual	United States	\$34,645,682.33
105	Teachers Retirement System of Georgia	United States	\$33,565,630.65
106	CNO Financial Group	United States	\$32,200,000.00
107	Employees Retirement System of Texas	United States	\$28,447,550.00
108	Macif	France	\$28,025,966.92
109	NFU Mutual	United Kingdom	\$27,914,095.11
110	State Teachers Retirement System of Ohio	United States	\$27,153,873.14
111	Ohio National Mutual Holdings	United States	\$26,162,563.45
112	Assicurazioni Generali	Italy	\$25,548,596.82
113	Sentry Insurance	United States	\$25,091,502.39
114	Groupama	France	\$24,968,896.40
115	FM Global	United States	\$22,463,755.00
116	Wesleyan	United States	\$19,371,989.05
117	Mutual of America Life Insurance Company	United States	\$17,231,955.78
118	knights of columbus	United States	\$17,207,726.07
119	AG2R La Mondiale	France	\$16,660,493.20
120	Minnesota Mutual Companies	United States	\$16,654,980.56
121	Old Republic International	United States	\$15,000,000.00
122	Amica Mutual Insurance	United States	\$14,409,486.55
123	Cuna Mutual Group	United States	\$14,000,000.00
124	kentucky teachers' retirement system	United States	\$13,985,011.77
125	Shelter Insurance	United States	\$13,500,000.00
126	Canal Insurance	United States	\$12,752,350.00
127	Oregon Public Employees Retirement System	United States	\$11,935,807.22
128	Guideone Insurance Group	United States	\$11,725,000.00
129	Mutual of Omaha	United States	\$11,700,000.00
130	Auto-Owners Insurance	United States	\$11,070,000.00

	Financial entity	Country	Total (USD)
131	Hanover Insurance	United States	\$11,000,000.00
132	Massachusetts Mutual Life Insurance Company	United States	\$10,949,167.71
133	Utah Retirement Systems	United States	\$10,432,599.44
134	Zurich Insurance	Switzerland	\$10,194,228.59
135	Nippon Life Insurance	Japan	\$8,966,792.75
136	Aetna	United States	\$8,500,000.00
137	Assurant	United States	\$7,588,000.00
138	Southern Farm Bureau Life Insurance	United States	\$7,000,000.00
139	United Fire Group	United States	\$7,000,000.00
140	Munich Re	Germany	\$6,862,385.85
141	Teacher Retirement System of Texas	United States	\$6,659,006.01
142	State Insurance Supervision Agency	United States	\$6,330,000.00
143	Sompo group	Japan	\$6,329,913.30
144	Sterling Mutuals	United States	\$6,125,000.00
145	Meiji Yasuda Life Insurance	Japan	\$5,555,904.61
146	Securian	United States	\$5,200,000.00
147	Cigna	United States	\$5,110,327.52
148	Assurity Group	United States	\$5,000,000.00
149	Kemper	United States	\$5,000,000.00
150	Pacific Mutual	United States	\$5,000,000.00
151	Tennessee Farmers Mutual Insurance	United States	\$5,000,000.00
152	Sampo Group	Finland	\$4,821,565.44
153	Kansas City Life Insurance Group	United States	\$4,500,000.00
154	New Mexico Educational Retirement Board	United States	\$4,206,902.17
155	kentucky retirement systems	United States	\$4,088,599.60
156	Itaú Banco	Brazil	\$3,951,374.03
157	Samsung Group	South Korea	\$3,800,000.00
158	Helvetia	Switzerland	\$3,609,652.40
159	NYCM Insurance	United States	\$3,500,000.00
160	Cape Cod Five Mutual Company	United States	\$2,852,994.98
161	Migdal Group	Israel	\$2,763,139.96
162	Louisiana State Employees' Retirement System	United States	\$2,628,946.00
163	Blue Cross Blue Shield of Michigan Mutual Insurance Company	United States	\$2,619,000.00
164	Sumitomo Life	Japan	\$2,560,671.88
165	Columbian Mutual Life Insurance Company	United States	\$2,500,000.00
166	Siemens	Germany	\$2,298,000.00
167	Anbang Insurance Group	China	\$2,000,000.00
168	Ameritas Mutual	United States	\$1,752,306.26
169	HDI	Germany	\$1,625,000.00
170	Central Mutual Insurance	United States	\$1,500,000.00
171	Baloise	Switzerland	\$1,361,480.40
172	Crédit Mutuel Arkéa	France	\$1,333,000.00
173	Indiana Farm Bureau	United States	\$1,325,000.00

	Financial entity	Country	Total (USD)
174	RLI Corporation	United States	\$1,250,000.00
175	GRAWE Group	Austria	\$932,460.28
176	Tressis Gestion	Spain	\$851,171.14
177	Dunas Capital	Spain	\$805,064.40
178	American Access Casualty Company	United States	\$750,000.00
179	Value Tree Wealth & Asset Management	Spain	\$619,546.76
180	Novo Banco Gestion	Spain	\$559,725.37
181	Intact Financial Corporation	Canada	\$490,475.00
182	Caja Rural	Spain	\$380,090.03
183	Erste Group	Austria	\$380,090.03
184	Miurex Inversiones Hispania	Spain	\$343,419.76
185	Banco Caminos	Spain	\$278,918.59
186	Acacia Inversion	Spain	\$273,292.67
187	Esfera Capital	Spain	\$271,841.01
188	Bankia (includes Banco financiero de Ahorro)	Spain	\$196,190.00
189	Gesiuris Asset Management	Spain	\$178,140.52
190	CIMD Group	Spain	\$86,968.00
191	Unicaja Banco	Spain	\$81,346.05
192	IRB-Brasil Reaseguros	Brazil	\$60,000.00
	Total		\$457,289,545,512.23

Source: Authors' own - International Armed Bank Database. Information from the Military Economic Cycle of the Delàs Centre

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