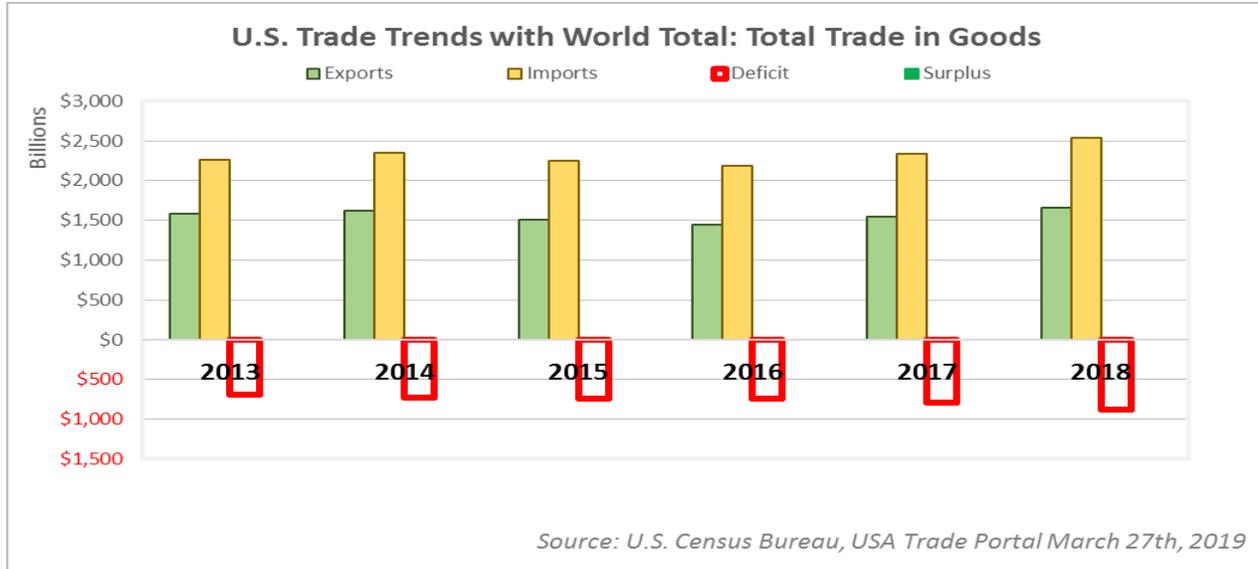




**I. Total U.S. Trade with the World**

In 2018, U.S. exports totaled \$1.7 trillion, a 7.6% (\$117.8 billion) increase from 2017 and slightly surpassed the last five years of average of U.S. exports; U.S. imports totaled \$2.5 trillion, a 8.6% (\$200.8 billion) increase from 2017, surpassed the last five years of average of U.S. Imports; and the trade deficit was \$878.7 billion, an 10.4% (\$83.0 billion) increase from 2017, setting a record high trade deficit.



Calendar Year	2013	2014	2015	2016	2017	2018	2013 - 2017 Average
<b>EXPORTS</b>	\$1,578,517	\$1,621,874	\$1,503,328	\$1,451,024	\$1,546,273	\$1,664,056	
Δvalue	--	\$43,356.9	(\$118,545.4)	(\$52,304.8)	\$95,249.4	\$117,782.6	\$1,540,203
Δpct	--	2.7%	-7.3%	-3.5%	6.6%	7.6%	
<b>IMPORTS</b>	\$2,267,987	\$2,356,356	\$2,248,811	\$2,187,600	\$2,341,963	\$2,542,733	
Δvalue	--	\$88,369.3	(\$107,544.7)	(\$61,211.3)	\$154,362.6	\$200,770.5	\$2,280,543
Δpct	--	3.9%	-4.6%	-2.7%	7.1%	8.6%	
<b>BALANCE</b>	(\$689,469.9)	(\$734,482.3)	(\$745,483.0)	(\$736,576.6)	(\$795,689.8)	(\$878,677.7)	
Δvalue	--	(\$45,012.4)	(\$11,000.7)	\$8,906.4	(\$59,113.2)	(\$82,987.9)	(\$740,340.3)
Δpct	--	6.5%	1.5%	-1.2%	8.0%	10.4%	

Source: U.S. Census Bureau, USA Trade Portal March 27th, 2019 ; Value of Data in Million



In 2018, of the \$1.7 trillion in U.S. exports to the World, the top commodity sectors were machinery and mechanical appliances (23.4%), transportation equipment (16.6%) and chemicals, plastics, leather products (15.4%).

In 2018, the \$2.5 trillion in U.S. imports from the World, the top commodity sectors were machinery and mechanical appliances (29.1%), transportation equipment (13.2%) and chemicals, plastics, leather products (13.1%).

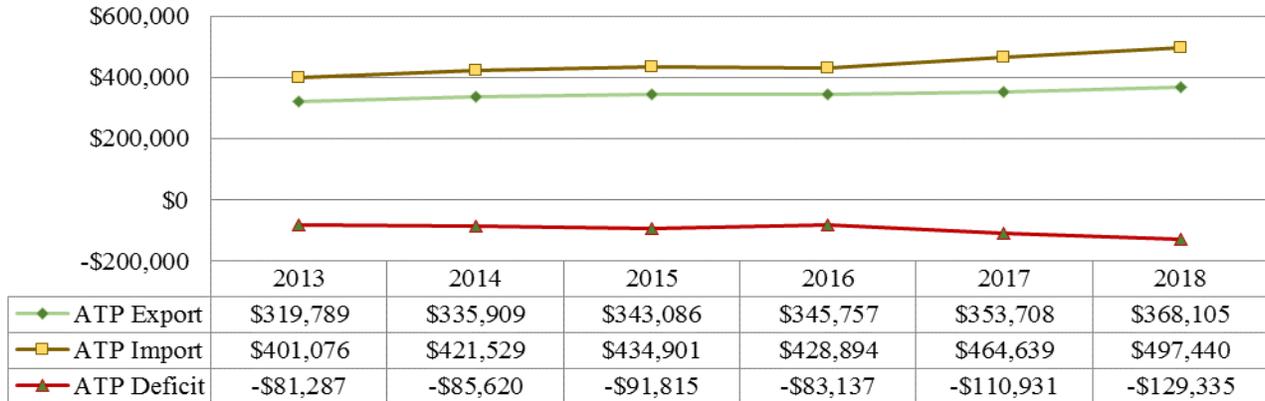
2018 U.S. Imports from World Total by Sector	2018 U.S. Commodity Trade With World Total	2018 U.S. Exports to World Total by Sector
<b>\$2,542,733,263,436</b>	<b>Total Value All Commodities</b>	<b>\$1,664,055,580,908</b>
6.1%	Agriculture (Chapters 01-24)	8.7%
9.4%	Minerals (Chapters 25-27)	12.0%
13.1%	Chemicals, Plastics, Leather (Chapters 28-43)	15.4%
1.9%	Wood Products (Chapters 44-49)	2.4%
5.8%	Textiles and Footwear (Chapters 50-67)	1.8%
3.3%	Stone, Glass, & Semiprecious Metals (Chapters 68-71)	4.6%
5.5%	Base metals (Chapters 72-83)	4.4%
29.1%	Machinery (Chapters 84-85)	23.4%
13.2%	Transportation (Chapters 86-89)	16.6%
3.9%	Optical, Measuring, Medical or Other Instruments (Chapters 90-92)	5.5%
0.1%	Arms & Ammunition (Chapter 93)	0.3%
4.2%	Miscellaneous Manufactured Items (Chapters 94 -96)	1.2%
0.5%	Art & Antiques (Chapter 97)	0.9%
4.0%	Special Items (Chapters 98-99** Imports only 99)	2.9%

Source: U.S. Census Bureau, USA Trade Portal March 27th, 2019



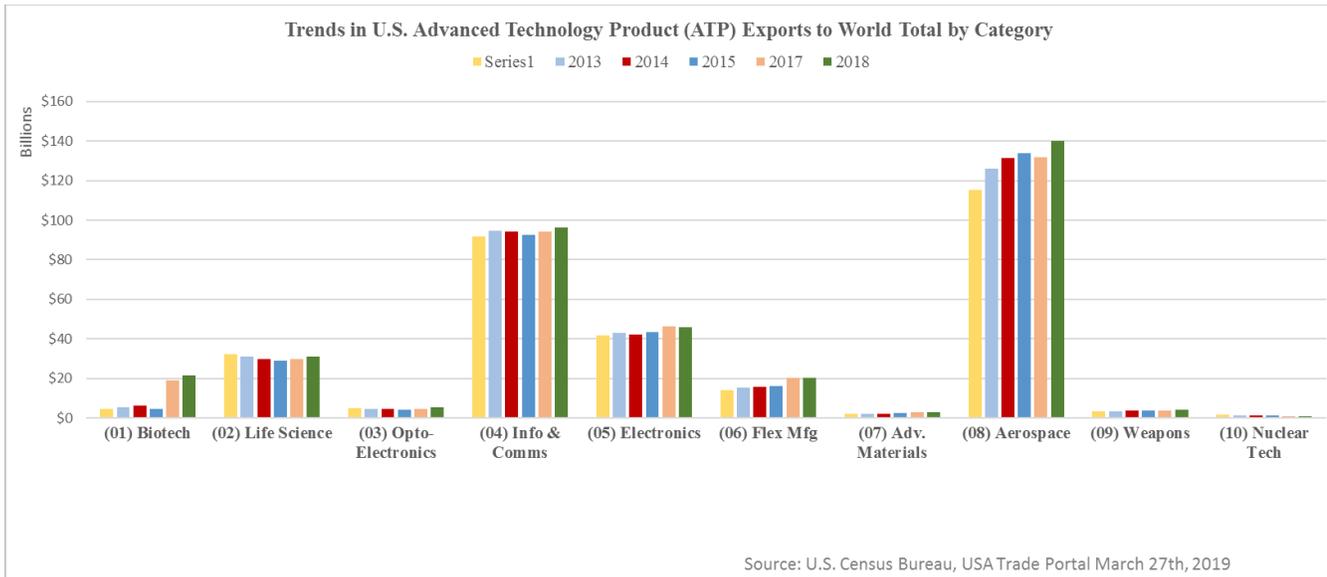
In 2018, the U.S. Advanced Technology Products (ATP)<sup>1</sup> exports were \$368.1 billion, a 4.1% (\$14.4 billion) increase from 2017; the U.S. ATP imports were \$497.4 billion, a 7.1% (\$32.8 billion) increase; and the ATP trade deficit was \$129.3 billion, a 16.6% (\$18.4 billion) increase.

**The U.S. ATP Trade with the World 2014 - 2018**  
\$million



Source: U.S. Census Bureau, Foreign Trade Statistics, Retrieved March 29, 2019

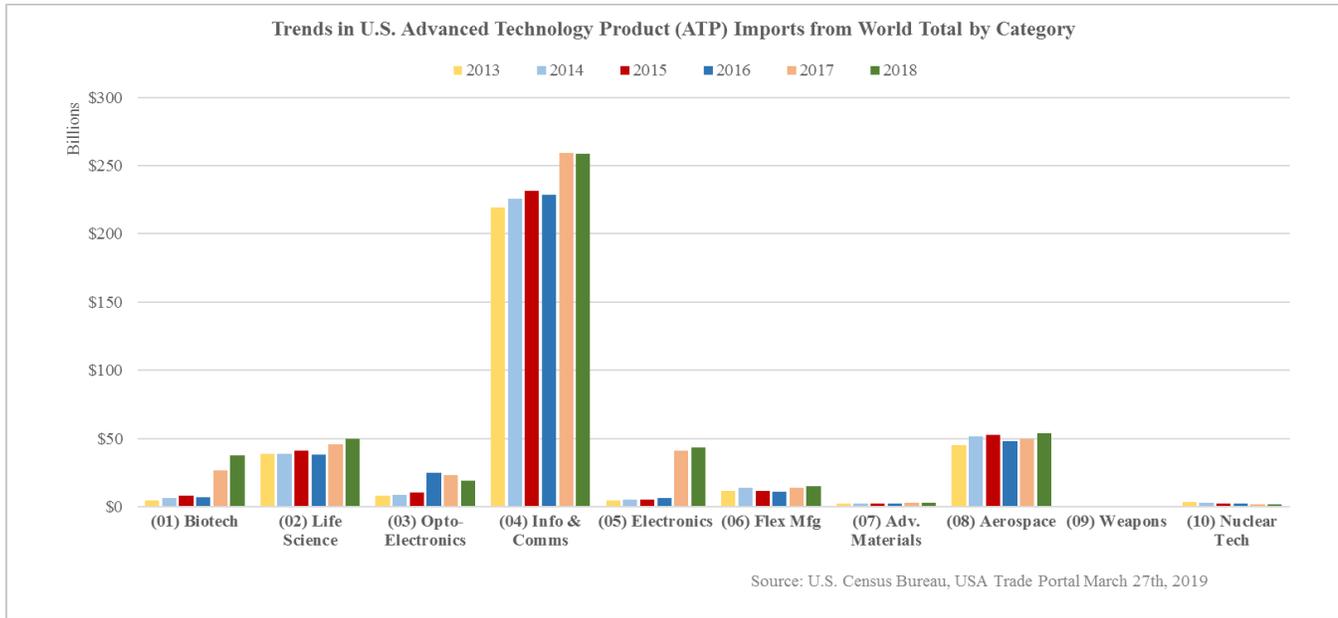
The largest categories of the U.S. ATP exports were Aerospace with \$140.2 billion, followed by Information and Communication with \$96.2 billion and Electronics with \$45.8 billion.



<sup>1</sup> Advanced Technology Products: about 500 of some 22,000 Harmonized System (HS) commodity classification codes contain products from a recognized high technology category (e.g., biotechnology).



The largest categories of the U.S. ATP imports were Information and Communication with \$269.8 billion, followed by Aerospace with \$54.0 billion and Life science with \$50.0 billion.





**II. Exports to the World subject to US Government Filing Requirements**

In 2018, U.S. exported \$1.7 trillion in goods, of which \$44.6 billion (2.7% of the total exports) was exported under a government license:

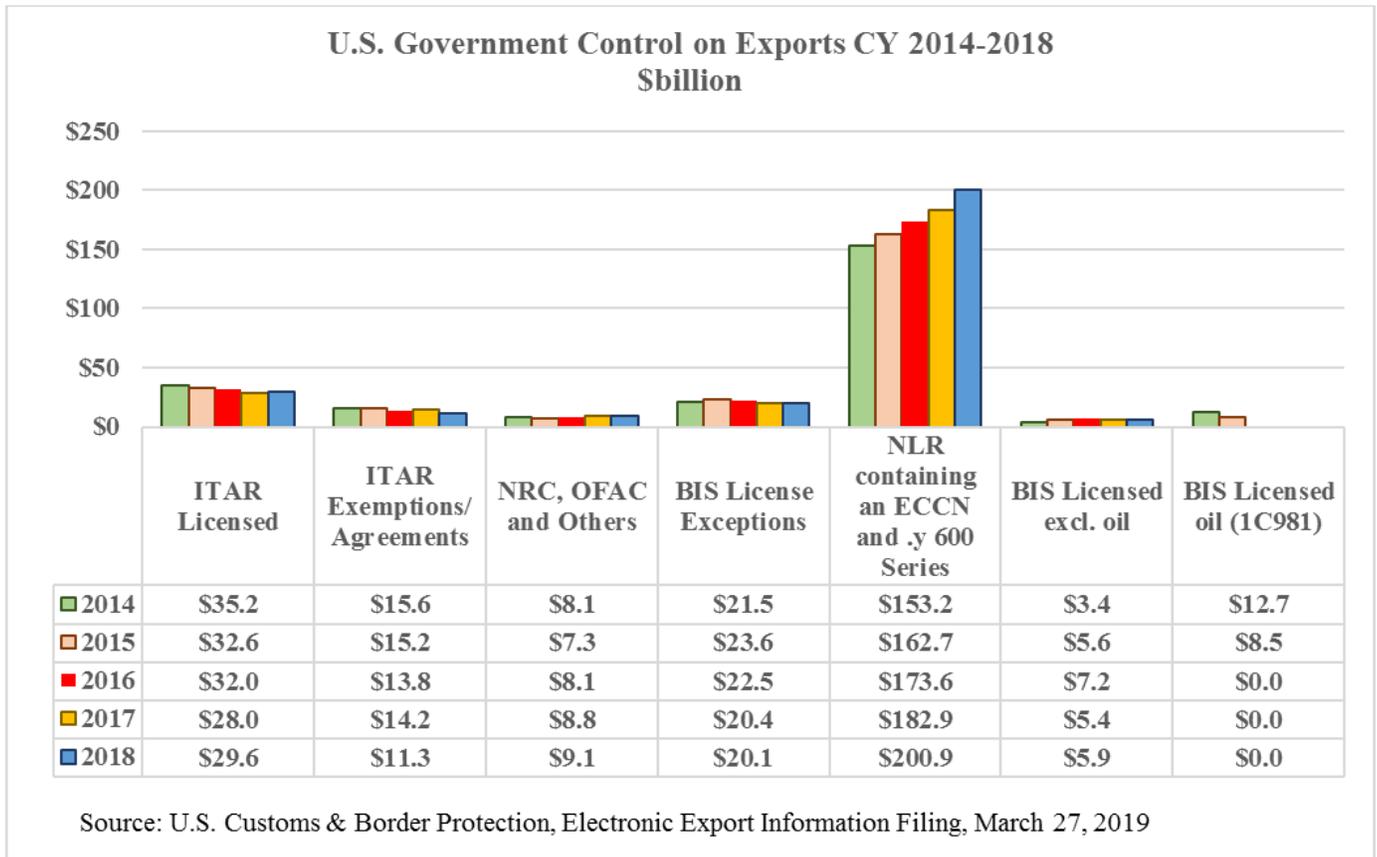
- \$5.9 billion was licensed by BIS, an increase of 9.1% (\$497.3 million more);
- \$29.6 billion was licensed under ITAR, an increase of 5.5% (\$1.5 billion more); and
- \$9.1 billion was licensed by NRC, OFAC and other government agencies, an increase of 3.2% (\$283.3 million more).

In 2018, \$31.4 billion (1.9% of the total exports) was exported under a government license exception/exemption/ agreement:

- \$20.1 billion was under BIS license exceptions (C35-C59, C62), a decrease of 1.5% (\$308.6 million less)
- \$11.3 billion was under ITAR license exemption/agreements, a decrease of 20.9% (\$3.0 billion less)

In 2018, \$200.9 billion (12.1%) was exported under No License Required (NLR):

- \$200.6 billion was under NLR with an ECCN reported (not including EAR99).
- \$293.4 million was under NLR for .y 600-Series items.





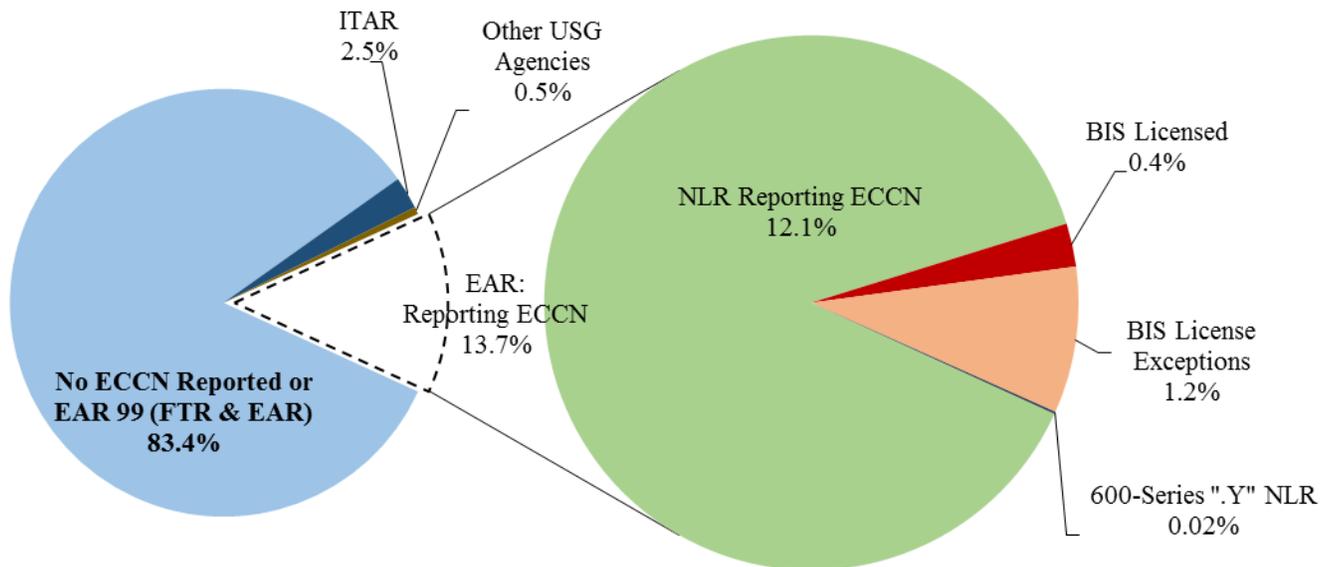
Trends in U.S. Exports to World Total by Regulatory Authority				
		2016	2017	2018
	Department of State	\$45,886.9	\$42,263.2	\$40,828.1
	Other USG Agencies	\$8,094.6	\$8,799.0	\$9,082.3
	Department of Commerce	\$1,397,042.0	\$1,495,210.7	\$1,614,145.2
	BIS Licensed	\$7,178.5	\$5,448.5	\$5,945.8
	BIS License Exceptions	\$22,531.8	\$20,400.6	\$20,091.9
	NLR reporting an ECCN	\$173,334.3	\$182,674.4	\$200,567.2
	NLR reporting EAR99	\$463,524.1	\$527,560.8	\$601,166.3
	NLR not reporting an ECCN	\$730,256.8	\$758,911.9	\$786,080.5
	600-Series ".Y" Paragraph NLR	\$216.5	\$214.6	\$293.4

Value in Millions, Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

In 2018, of the \$1.7 trillion in U.S. exports to the World:

- 1.6% were subject to a BIS license requirement:
  - 0.4% was exported under a BIS license.
  - 1.2% was exported under a BIS license exception.
- 12.1% were exported under No License Required (NLR) with an ECCN reported and 0.02% was exported under NLR for .y 600-series items.

2018 U.S. Exports to the World: Export Authorizations by Regulatory Authority

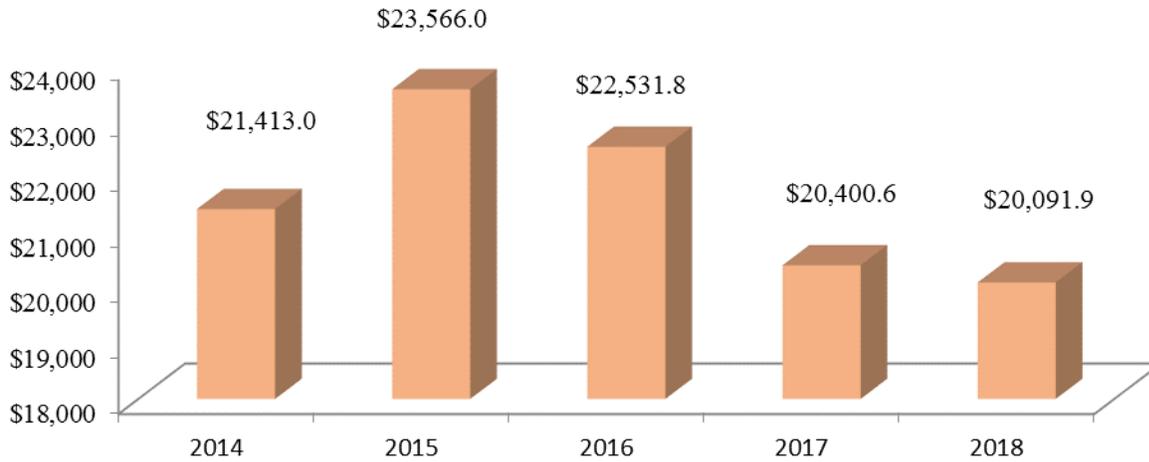


Source: U.S. Customs & Border Protection, Electronic Export Information Filing, March 27, 2019



In 2018, U.S. exports to the World shipped under a BIS license exception totaled \$20.1 billion, a 1.5% (\$308.6 million) decrease from 2017.

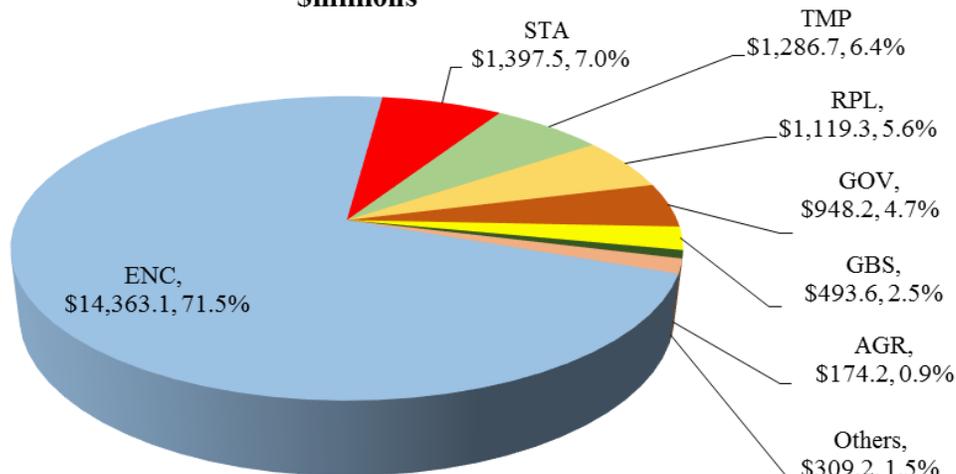
### U.S. Exports to the World under BIS License Exceptions 2014-2018 \$million



Source: U.S. Customs & Border Protection, Electronic Export Information Filing, March 27, 2019, Value in Millions

In 2018, the top license exception, Encryption Commodities, Software and Technology (ENC) totaled \$14.3 billion (71.5% of all license exceptions), followed by Strategic Trade Authorization valued at \$1.4 billion (7.0%).

### 2018 U.S. Exports by BIS License Exceptions \$millions



Source: U.S. Customs & Border Protection, Electronic Export Information Filing, March 27, 2019, Value in Millions

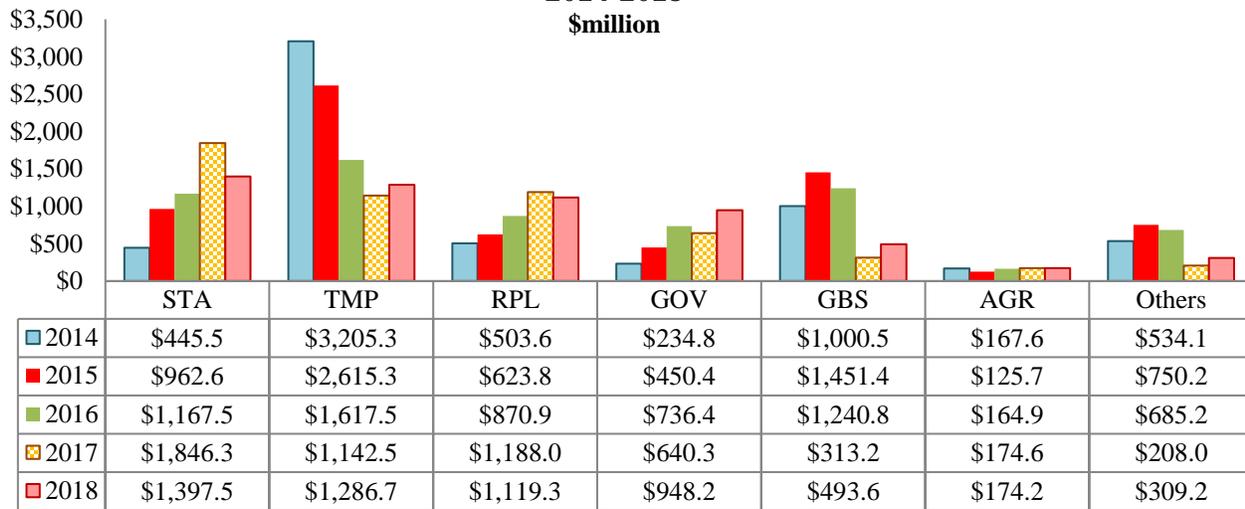


**U.S. Exports to the World under BIS License Exception  
Encryption Commodities, Software and Technology  
2014-2018**  
\$million



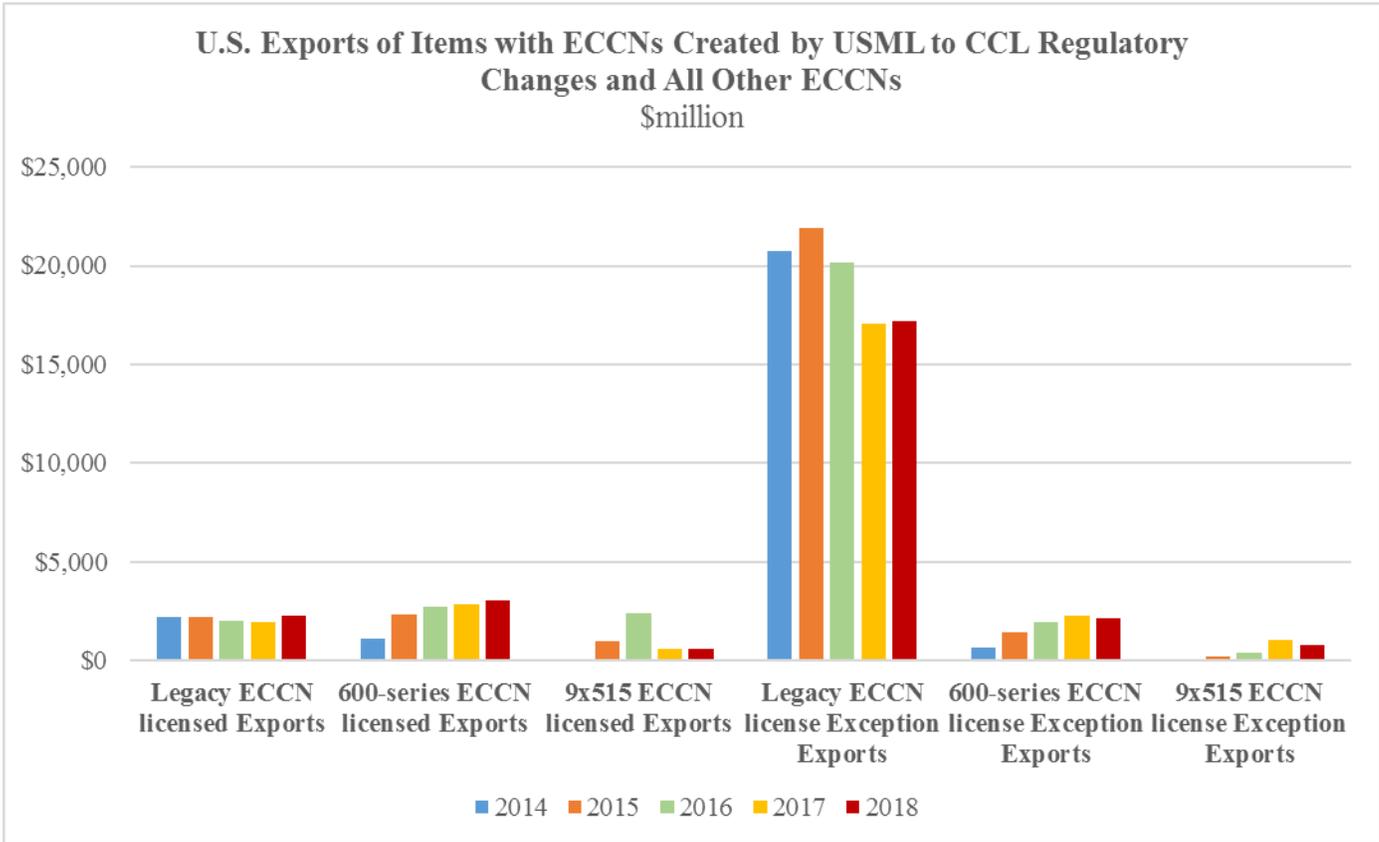
Source: U.S. Customs & Border Protection, Electronic Export Information Filing, March 27, 2019

**U.S. Exports to the World under BIS License Exceptions  
2014-2018**  
\$million



Note: Excluding ENC

Source: U.S. Customs & Border Protection, Electronic Export Information Filing, March 27, 2019



	2014	2015	2016	2017	2018
Legacy ECCN licensed Exports	\$2,224.7	\$2,220.2	\$2,046.2	\$1,978.8	\$2,274.3
600-series ECCN licensed Exports	\$1,128.6	\$2,369.8	\$2,719.1	\$2,858.5	\$3,053.3
9x515 ECCN licensed Exports	\$2.3	\$1,007.8	\$2,413.3	\$611.2	\$618.2
Legacy ECCN license Exception Exports	\$20,715.0	\$21,898.4	\$20,155.8	\$17,069.4	\$17,170.3
600-series ECCN license Exception Exports	\$692.4	\$1,465.0	\$1,967.7	\$2,270.3	\$2,146.9
9x515 ECCN license Exception Exports	\$5.7	\$202.5	\$408.3	\$1,060.9	\$774.7



Top Ten ECCNs by Value to World Total Under a BIS License (\$millions)	
<b>LICENSED</b>	#1 9A610 Military Aircraft and Related Commodities
	#2 9A515 Spacecraft and Related Commodities
	#3 9A619 Military Gas Turbine Engines and Related Commodities
	#4 3A611 Military Electronics
	#5 0A606 Ground Vehicles and Related Commodities
	#6 7A103 Instrumentation, Navigation Equip./Systems Not
	#7 2B350 Chemical Manufacturing Facilities and Equip.
	#8 6A001 Acoustic Systems, Equipment and "Components"
	#9 9A001 Aero Gas Turbine Engines
	#10 9A604 Commodities Related to Launch Vehicles, Missiles, Rockets, torpedoes, ...

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

Top Ten ECCNs by Value to World Total Under a BIS License Exception (\$millions)	
<b>EXCEPTIONS</b>	#1 5A002 Systems/Equip./Integrated Circuits for Info Sec
	#2 9A610 Military Aircraft and Related Commodities
	#3 9A515 Spacecraft and Related Commodities
	#4 N/A No ECCN is required for license exception on TMP as per EAR 758.1.(g)(2)
	#5 9A619 Military Gas Turbine Engines and Related Commodities
	#6 3A001 Electronic Components
	#7 3A611 Military Electronics
	#8 EAR99 Items subject to the EAR that are not elsewhere controlled
	#9 9A991 Aircraft N.E.S. and Gas Turbine Engines not Controlled by 9A001 or 9A101 ...
	#10 5B002 Information Security Test, Inspection and Production Equip., as follows
*Note: No ECCN is required for License Exception TMP as per EAR 758.1(g)(2)	

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

Top Ten ECCNs by Value to World Total not subject to a BIS License Requirement (\$millions)	
<b>NLR with ECCN</b>	#1 9A991 Aircraft N.E.S. and Gas Turbine Engines not Controlled by 9A001 or 9A101 ...
	#2 3B991 Other Mfg/Test Equip. Not Controlled By 3B
	#3 4A994 Computers Not Controlled By 4A001 or 4A003
	#4 5A992 Equipment not Controlled by 5A002
	#5 5A991 Telecommunication Equip. Not Controlled by 5A001
	#6 3A991 Electronic Devices and Components
	#7 7A994 Other Navigation Direction Finding Equip. ... Not Controlled under 7A003
	#8 3B992 Equip. for the Inspection/Testing of Components not Controlled by 3B002
	#9 2B999 Specific Processing Equip., N.E.S.
	#10 3A999 Specific Processing Equip., N.E.S.

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

NOTE: ECCN Descriptions have been truncated; please review Commerce Control List for Full Description



Top Ten ECCNs by Count to World Total Under a BIS License		
<b>LICENSED</b>	#1	9A610 Military Aircraft and Related Commodities
	#2	9A619 Military Gas Turbine Engines and Related Commodities
	#3	3A611 Military Electronics
	#4	2B230 Pressure Transducers
	#5	0A987 Optical Sighting Devices for Firearms
	#6	0A606 Ground Vehicles and Related Commodities
	#7	2B350 Chemical Manufacturing Facilities and Equip.
	#8	7A103 Instrumentation, Navigation Equip./Systems Not
	#9	0A984 Shotguns, Buckshot, Shotgun Shells
	#10	EAR99 Items subject to the EAR that are not elsewhere controlled

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

Top Ten ECCNs by Count to World Total Under a BIS License Exception		
<b>EXCEPTIONS</b>	#1	5A002 Systems/Equip./Integrated Circuits for Info Sec
	#2	9A610 Military Aircraft and Related Commodities
	#3	N/A No ECCN is required for license exception on TMP as per EAR 758.1.(g)(2)
	#4	EAR99 Items subject to the EAR that are not elsewhere controlled
	#5	9A619 Military Gas Turbine Engines and Related Commodities
	#6	3A611 Military Electronics
	#7	5D002 Software as follows (see List of Items Controlled)
	#8	3A001 Electronic Components
	#9	9A991 Aircraft N.E.S. and Gas Turbine Engines not Controlled by 9A001 or 9A101 ...
	#10	5B002 Information Security Test, Inspection and Production Equip., as follows

\*Note: No ECCN is required for License Exception TMP as per EAR 758.1(g)(2)

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

Top Ten ECCNs by Count to World Total not subject to a BIS License Requirement		
<b>NLR with ECCN</b>	#1	9A991 Aircraft N.E.S. and Gas Turbine Engines not Controlled by 9A001 or 9A101 ...
	#2	5A992 Equipment not Controlled by 5A002
	#3	4A994 Computers Not Controlled By 4A001 or 4A003
	#4	5A991 Telecommunication Equip. Not Controlled by 5A001
	#5	3B991 Other Mfg/Test Equip. Not Controlled By 3B
	#6	7A994 Other Navigation Direction Finding Equip. ... Not Controlled under 7A003
	#7	3A991 Electronic Devices and Components
	#8	3A992 General Purpose Electronic Equip. Note Controlled by 3A002
	#9	3A999 Specific Processing Equip., N.E.S.
	#10	2B999 Specific Processing Equip., N.E.S.

Source: U.S. Customs & Border Protection, Electronic Export Information Filings March 27th, 2019

NOTE: ECCN Descriptions have been truncated; please review Commerce Control List for Full Description



### III. Licensing to the World subject to US Government Filing Requirements

In 2018, BIS reviewed a total of 34,851 license applications. Of these, 33,844 license applications for exports and reexports for tangible items, software and technology, a decrease of 3.0% (1,060 less) from 34,904 in 2017.

- Approved licenses decreased 2.0% (601 less) from 29,633 in 2017 to 29,032 in 2018. The approval rate was 85.8%;
- Denied licenses applications decreased 4.7% (13 less) from 277 in 2017 to 264. The denied rate was 0.8%;
- Return without action (RWA) decreased 8.9% (446 less) from 4,994 in 2017 to 4,548. The RWA rate was 13.4%;

In 2018, BIS reviewed 1,007 license applications for deemed export, a decrease of 34.0% (518 less) from 1,525 in 2017, mainly due to decrease of applications from Chinese Nationals (421 less)

- Approved deemed licenses decreased 39.3% (548 less) from 1,394 in 2017 to 846 in 2018. The approval rate was 91.5%;
- Denied licenses applications decreased 54.2% (13 less) from 24 in 2017 to 11. The denied rate was 1.6%;
- Return without action (RWA) increased 40.2% (43 more) from 107 in 2017 to 150. The RWA rate was 7.0%;

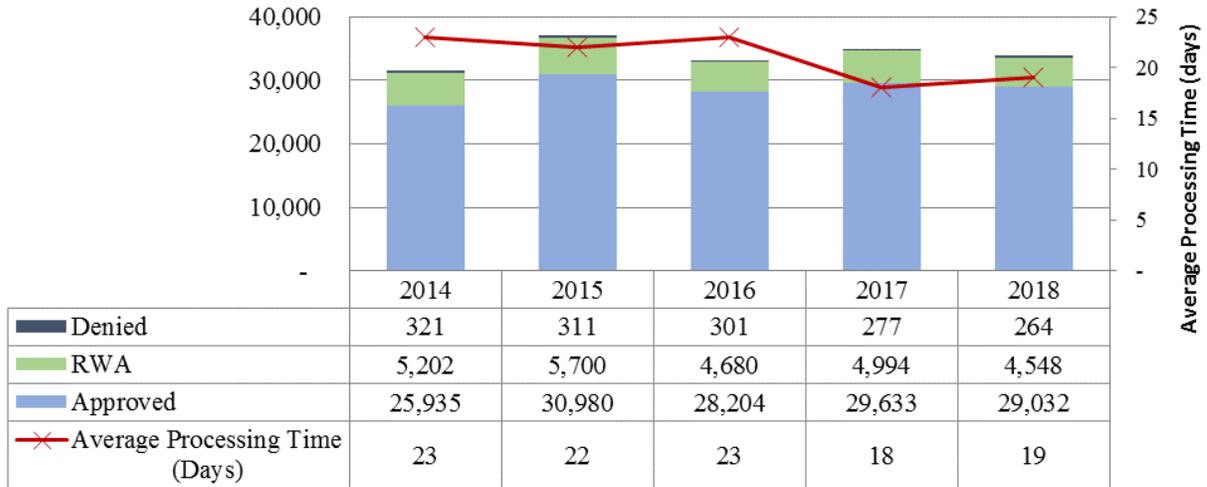


Overview of BIS License Applications 2014 - 2018										
	2014	2015	2016	2017	2018	% of the total by decision	% of the Grand Total license applications	% change from 2017	Change from 2017	
<b>Grand Total license applications</b>	32,521	38,372	34,661	36,429	<b>34,851</b>			-4.3%	-1,578	
<b>Total license applications for deemed export</b>										
	1,063	1,381	1,476	1,525	<b>1,007</b>		<b>2.9%</b>	-34.0%	-518	
<b>Approved</b>	964	1,268	1,377	1,394	846	91.5%		-39.3%	-548	
<b>Denied</b>	18	18	13	24	11	1.6%		-54.2%	-13	
<b>RWA</b>	81	95	86	107	150	7.0%		40.2%	43	
<b>Total license applications for tangible items, software and technology</b>										
	31,458	36,991	33,185	34,904	<b>33,844</b>		<b>97.1%</b>	-3.0%	-1,060	
Approved	25,935	30,980	28,204	29,633	29,032	85.8%		-2.0%	-601	
Denied	321	311	301	277	264	0.8%		-4.7%	-13	
RWA	5,202	5,700	4,680	4,994	4,548	13.4%		-8.9%	-446	
<b>100.0%</b>										
<b>Detailed License Information regarding Tangible items, software and technology</b>										
	2014	2015	2016	2017	2018	% of the total by decision	% of the total for tangible items	% of the Grand Total license applications	% change from 2017	Change from 2017
<b>Total license applications for legacy ECCNs</b>	21,988	21,331	18,546	19,081	<b>19,474</b>		<b>57.5%</b>	<b>55.9%</b>	2.1%	393
Approved	17,804	16,968	15,060	15,446	16,051	82.4%	3.9%		605	
Denied	297	250	223	220	227	1.2%	3.2%		7	
RWA	3,887	4,113	3,263	3,415	3,196	16.4%	-6.4%		-219	
<b>Total license applications for 600-series items</b>	9,250	14,413	13,493	14,582	<b>13,480</b>		<b>39.8%</b>	<b>38.7%</b>	-7.6%	-1,102
Approved	7,995	12,968	12,247	13,134	12,183	90.4%	-7.2%		-951	
Denied	19	23	56	39	29	0.2%	-25.6%		-10	
RWA	1,236	1,422	1,190	1,409	1,268	9.4%	-10.0%		-141	
<b>Total license applications for 9x515 items</b>	220	1,247	1,146	1,241	<b>890</b>		<b>2.6%</b>	<b>2.6%</b>	-28.3%	-351
Approved	136	1,044	897	1,053	798	89.7%	-24.2%		-255	
Denied	5	38	22	18	8	0.9%	-55.6%		-10	
RWA	79	165	227	170	84	9.4%	-50.6%		-86	
							<b>100.0%</b>	<b>97.1%</b>		

Source: Commerce U.S. Exports Exporter Support System, retrieved on April 3, 2019



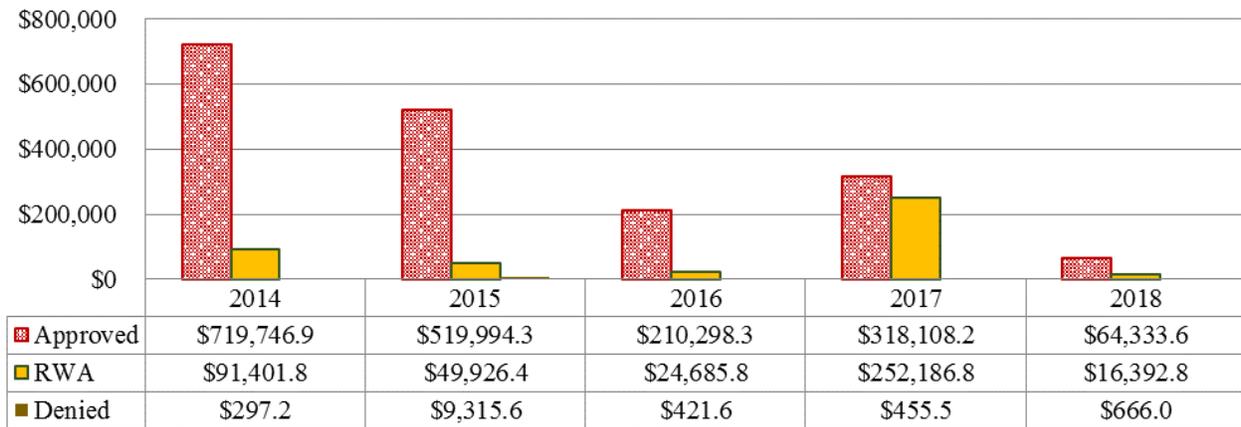
**BIS Licenses for Tangible Items, Software and Technology for the World  
by License Count  
2014-2018**



Source: Commerce U.S. Exports Exporter Support System, April 11, 2019

**Note: Figures above do not include deemed export applications**

**BIS Licenses for Tangible Items, Software and Technology for the World  
by Value  
2014-2018  
\$million**

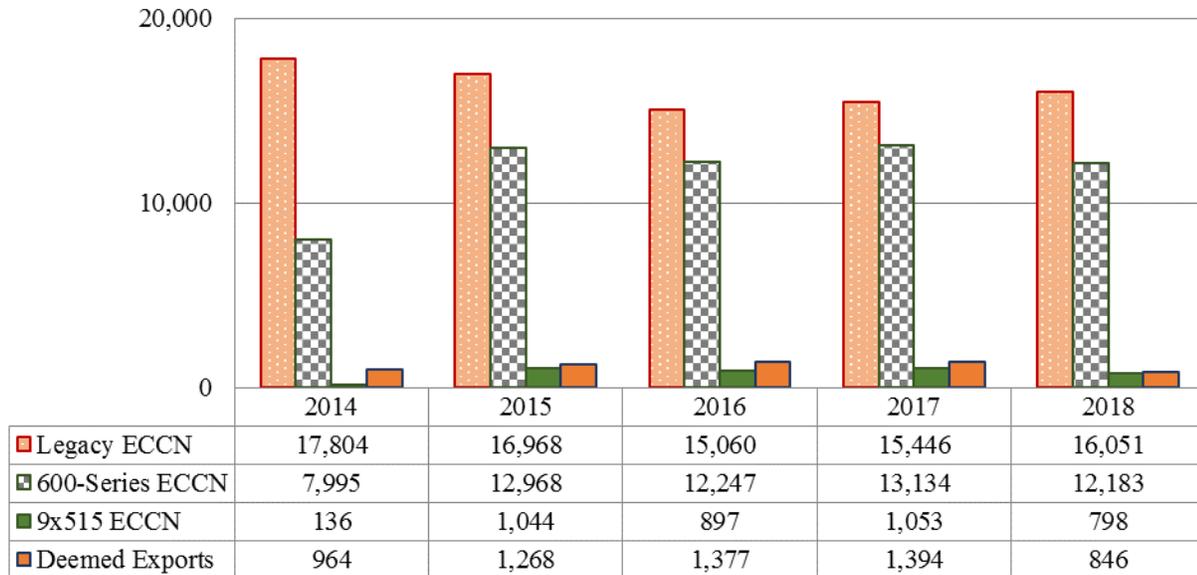


Source: Commerce U.S. Exports Exporter Support System, April 11, 2019

Note: (1) Effective on December 27, 2015, license requirement was removed for Crude petroleum.



**Overview of BIS Approved Licenses  
2014-2018**

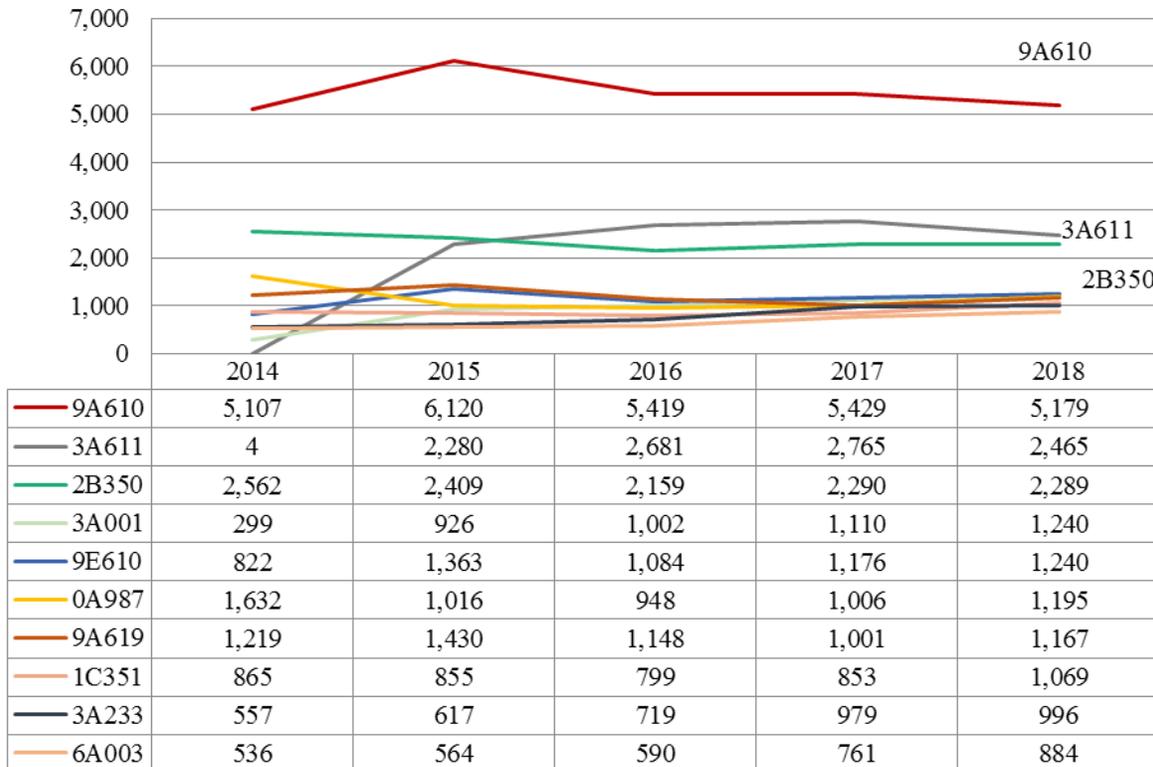


Source: Commerce U.S. Exports Exporter Support System, April 11, 2019



In 2018, similar to 2017, the top approved ECCN were 9A610 (5,179 approvals) for Military aircraft and related commodities and 3A611 (2,465 approvals) for military electronics; and the top approved Legacy ECCN was 2B350 (2,289 approvals) for Chemical manufacturing facilities and equipment.

**Top Ten Approved ECCNs by Count  
2014 - 2018**



Source: Commerce U.S. Exports Exporter Support System, Retrieved on February 8, 2019



**2018 Top Twelve ECCNs by License Count for Denied Licenses**

ECCN	Description	Denied applications	Value \$million
EAR99	Items subject to the EAR that are not elsewhere controlled	36	\$21.4
3A001	Electronic components and specially designed components	31	\$0.7
0A987	Optical sighting devices for firearms	24	\$7.9
5D002	Software for information security	20	\$1.9
0A984	Shotguns, buckshot shotgun shells	13	\$0.4
5E002	Technology for the "development", "production" or "use" of equipment controlled by 5A002 or 5B002 or "soft-ware" controlled by 5D002.a or 5D002.c	13	\$0.000001
9A610	Military aircraft and related commodities	9	\$1.5
1A984	Chemical agents, including tear gas; liquid pepper; smoke bombs, etc.	8	\$1.9
2B001	Machine tools	8	\$4.6
3E991	Technology for the "development", "production", or "use" of electronic devices, "parts" or "components" controlled by 3A991, general purpose electronic equipment controlled by 3A992 or manufacturing and test equipment controlled by 3B991 or 3B992, or materials controlled by 3C992	8	\$0.000001
4E992	Technology other than that controlled in 4E001 for the "development," "production," or "use" of equipment controlled by 4A994, or "software" controlled by 4D993 or 4D994	8	\$0.000001
5E991	Technology for the "Development" or "Production" or "Use" of Equipment controlled by 5A991 or 5B991 or "Software" controlled by 5D991	8	\$0.000001

Source: Commerce U.S. Exports Exporter Support System, February 9, 2019

