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Asymmetries in international trade in goods statistics: UK measured against EU Member States, 2015 to 2017

Summary

- Asymmetries are the differences between the published trade statistics of the reporting country and its partner countries. Each country collects data on their own international trade-in-goods for both arrivals and dispatches, simplistically the 'mirror flow' collected by the partner countries should match (i.e. one country's dispatches should mirror the partner country's arrivals). In reality, it is often the case that the figures do not match and this is referred to as an 'asymmetry'.
- The total absolute asymmetry in 2017 between the UK's arrivals from the EU and the EU's dispatches to the UK was €30bn. By comparison, in 2015 this was €24bn and in 2016 this was €32bn.
- The total absolute asymmetry in 2017 between the UK's dispatches to the EU and the EU's arrivals from the UK was €14bn. By comparison, in 2015 this was €13bn and in 2016 this was €12bn.
- The relative asymmetry in 2017 between the UK's arrivals from the EU and their dispatches to the UK was -8.6%. By comparison, in 2015 this was -4.4% and in 2016 this was -8.2%.
- The relative asymmetry in 2017 between the UK's dispatches from the EU and their arrivals from the UK was -6.1%. By comparison, in 2015 this was 0.3% and in 2016 this was -2.8%.

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1. Introduction

Asymmetries are the differences between the published trade statistics of the reporting country and its partner countries. Each country collects data on their own international trade-in-goods for both arrivals and dispatches, simplistically the 'mirror flow' collected by the partner countries should match i.e. one country's dispatch should mirror the partner countries arrival. In reality, it is often the case that the figures do not match and this is referred to as an 'asymmetry'.

For example, there may be a difference between what the United Kingdom (UK) records as arrivals from Croatia, and what Croatia records as dispatches to the UK. This difference or asymmetry can be measured. Further information on how asymmetries are measured can be found in Annex 1: Measures of asymmetry.

This paper is an asymmetry study covering trade in goods between the UK and EU Member States for the calendar years 2015, 2016 and 2017. The data used in the compilation of this report has been extracted from Eurostat's [Comext database](#). Additional tables supporting this paper can be found in the accompanying statistical [dataset](#).

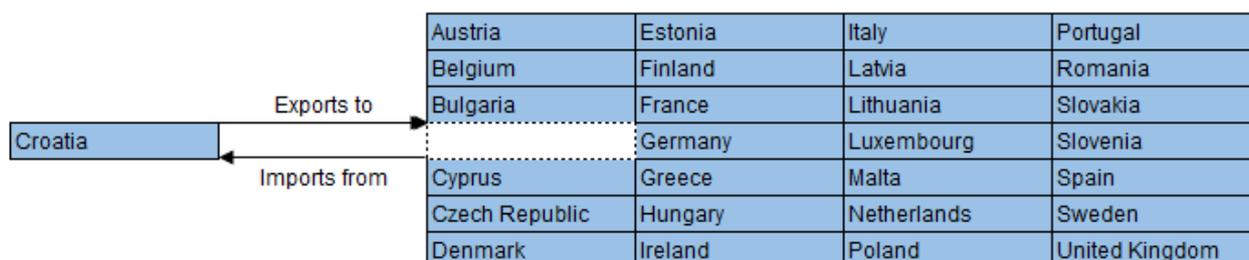
International trade in goods data detailing trade between the UK and EU Member States are collected via the Intrastat survey and controlled by EU Statistical legislation which aims to harmonise the classifications and collection.

Both ONS and HMRC are undertaking a series of investigations into asymmetries. Previously published papers in this series are:

- **Article 1** - [Asymmetries in trade data - A UK perspective:](#)
Published on 13th July 2017, by ONS
- **Article 2** - [Trade asymmetries between the UK and EU Member States, 2014 to 2016:](#)
Published on 7th November 2017, by HMRC
- **Article 3** - [Asymmetries in trade data - diving deeper into UK bilateral trade data:](#)
Published on 29th January 2018, by ONS
- **Article 4** - [Asymmetries in international trade in goods statistics: UK measured against its non-EU partners, 2014 to 2016](#)
Published on 15th May 2018, by HMRC
- **Article 5** - [Asymmetries in trade data: extending analysis of UK bilateral trade data](#)
Published on 30th August 2018, by ONS

2. Trade in goods asymmetries between EU Member States by trade value, 2015–2017

This section explores the asymmetries of each EU Member States by value, comparing each Member State’s trade flow against the mirror flow. For example, Croatia’s arrivals from the EU against dispatches from Croatia to the EU, this is shown in diagram below.



2.1 Arrivals: EU Member States share of absolute asymmetries

Graph 2.1 shows the arrivals absolute asymmetries between each Member State and the remaining Member States, for the years 2015 to 2017, together with its average arrival value between 2015 and 2017 within the EU.

- The top five countries by average value of arrivals between 2015 and 2017 were Germany, France, United Kingdom, Italy and Belgium. These accounted for 53% of the total absolute asymmetry for arrivals in 2017.
- The bottom five countries by average value of arrivals between 2015 and 2017 were Malta, Cyprus, Latvia, Estonia and Croatia. These accounted for 3.6% of the total absolute asymmetry for arrivals in 2017.
- A notable decrease was seen by Germany over the three year time series. In 2015 Germany’s share of the total absolute asymmetry was 12%, in 2016 this decreased to 6.4%, in 2017 this decreased further to 4.0%.
- In 2015 the UK’s share of the total absolute asymmetry was 14%, in 2016 this increased to 22%, in 2017 this increased further to 23%. This means that the difference between what the UK reports as arrivals to the EU, against what the EU reports as dispatches to the UK has widened. It is worth noting that this does not infer that one set of data is better or worse than another.

2.2 Arrivals: EU Member States relative asymmetries

Graph 2.2 shows the arrivals relative asymmetries for each EU Member State against the rest of the EU for the years 2015 to 2017.

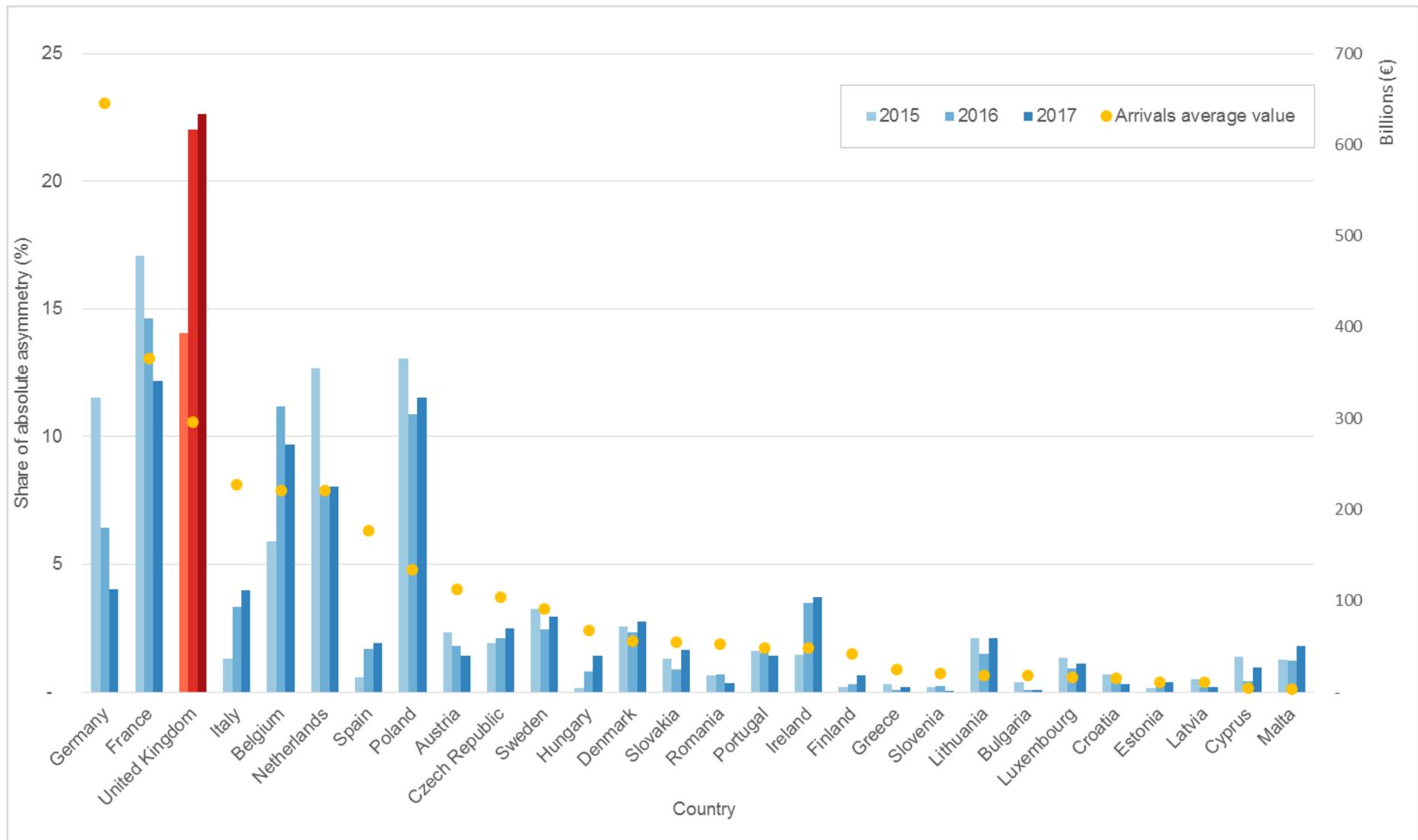
- Germany had the largest average arrivals value within the EU between 2015 and 2017, their relative asymmetry has remained consistently low. In 2015, Germany's relative asymmetry was -1.8%, in 2016 this narrowed to -1.1%, in 2017 this narrowed further to -0.6%.
- Greece, Latvia and Slovakia all changed from a negative asymmetry in 2015 to a positive relative asymmetry in 2017. Most notably, in 2015 Latvia had a relative asymmetry of -4.7% in 2016 this narrowed to -2.2%, then in 2017 this changed to positive but narrowed to 1.8%.
- Malta had the smallest average arrivals value, their relative asymmetry has consistently been the largest. In 2015 Malta's relative asymmetry was -29%, in 2016 this widened to -36%, in 2017 this widened further to -47%.
- In 2015 the UK's relative asymmetry was -4.4%, in 2016 this widened to -8.2%, in 2017 this narrowed slightly to -8.0%.

2.3 Arrivals: EU Member States average relative asymmetries and arrivals value

Graph 2.3 shows the arrivals average relative asymmetry (regardless of sign) between each EU Member State for the years 2015 to 2017, together with the average total trade value.

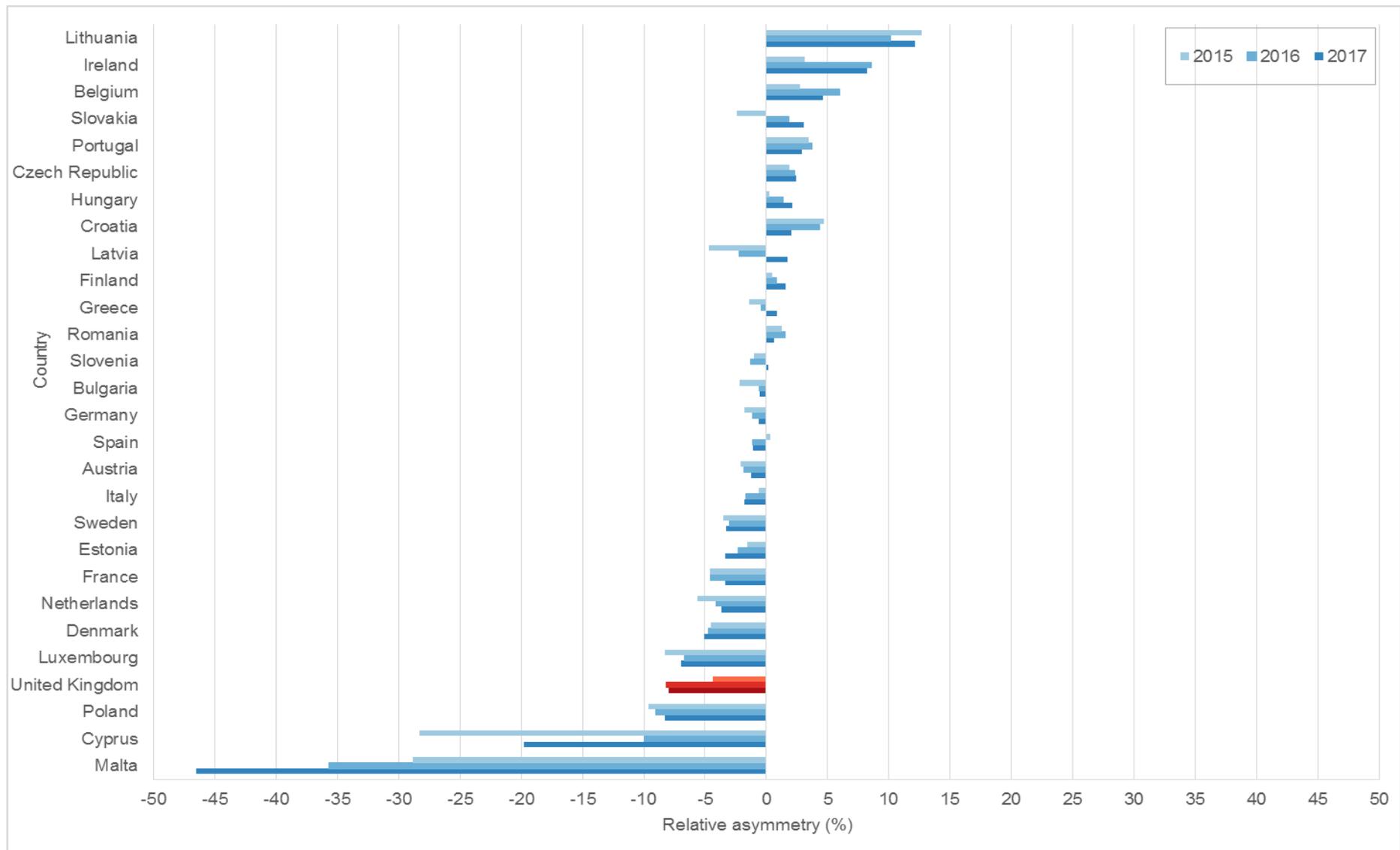
- Germany and France had the two largest average arrivals values. They had comparatively small average relative asymmetries.
- Cyprus and Malta had the two smallest average arrivals values. They had comparatively large average relative asymmetries.
- Greece had a low average arrivals value (€24bn), however their average relative asymmetry of -0.3% was the lowest within the EU.
- The UK had the third highest average arrivals value (€296bn) and an average relative asymmetry of -6.9%.

Graph 2.1 Arrivals: EU Member States share of absolute asymmetries, 2015 to 2017, ordered by arrivals average value



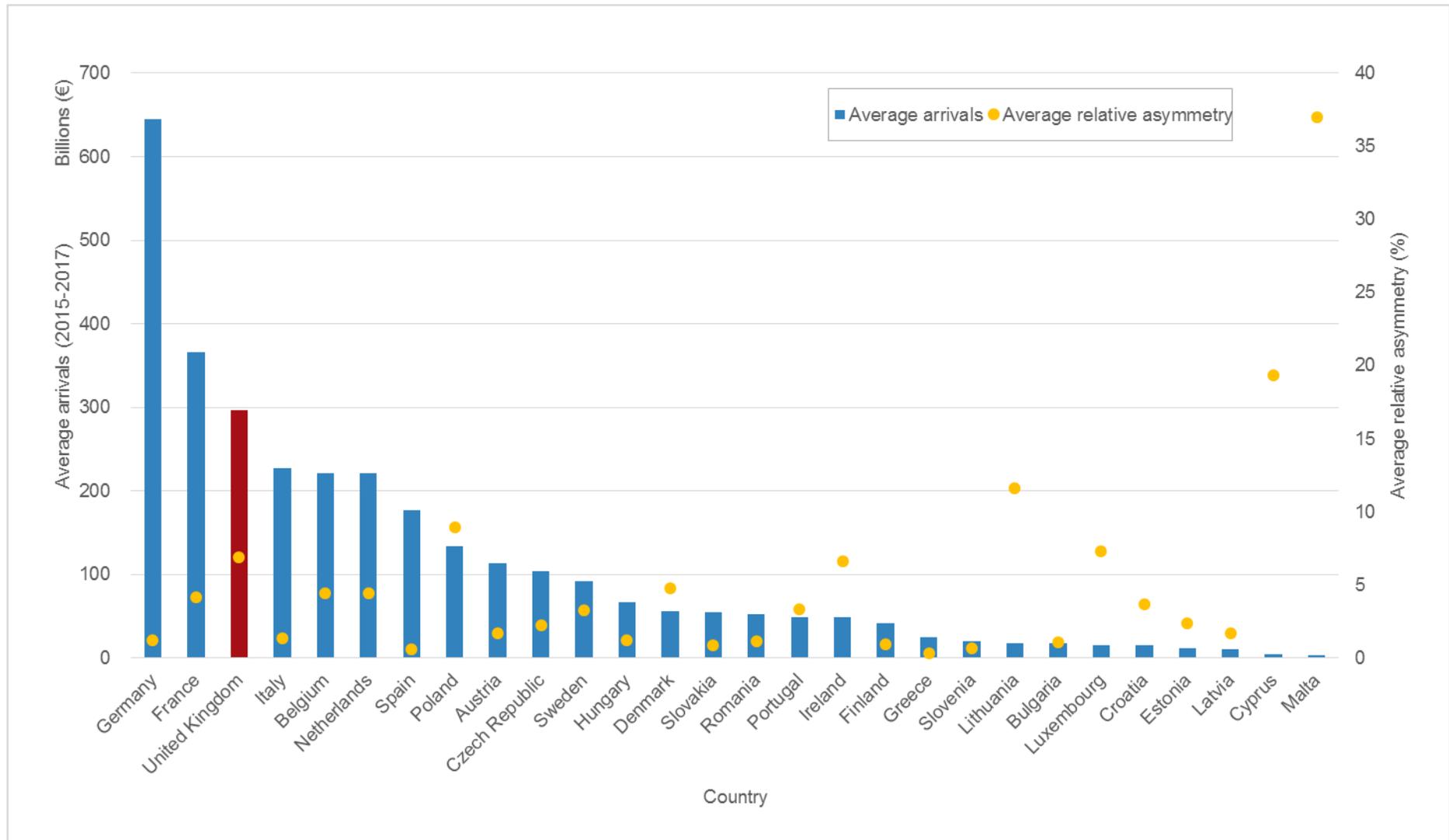
Source: Comext database, extracted October 2018

Graph 2.2 Arrivals: EU Member States relative asymmetries, 2015 to 2017, ordered by 2017 value (%)



Source: Comext database, extracted October 2018

Graph 2.3 Arrivals: EU Member States average total arrivals versus average relative asymmetries, 2015 to 2017, ordered by average total arrivals.



Source: Comext database, extracted October 2018

2.4 Dispatches: EU Member States share of absolute asymmetries

Graph 2.4 shows the share of dispatches absolute asymmetry for each Member State against the rest of the EU, for the years 2015 to 2017, together with their average dispatch value within the EU.

- The top five countries by average value of dispatches between 2015 and 2017 were Germany, Netherlands, France, Belgium and Italy. These accounted for 44% of the total absolute asymmetry for dispatches in 2017.
- The bottom five countries by average value of dispatches between 2015 and 2017 were Malta, Cyprus, Latvia, Croatia and Estonia. These accounted for 1.6% of the total absolute asymmetry for dispatches in 2017.
- A notable decrease was seen by Germany over the three year time series. In 2015 Germany's share of the total absolute asymmetry was 13%, in 2016 this decreased to 11%, in 2017 this decreased further to 8.2%.
- The UK's share of the total absolute asymmetry in 2015 was 0.3%, in 2016 this increased to 3.2%, in 2017 this increased further to 7.4%, consequently the UK's asymmetry in 2017 was more comparable to countries with similar average dispatch values such as Italy and France.

2.5 Dispatches: EU Member States relative asymmetries

Graph 2.5 shows the dispatches relative asymmetries between each Member State against the rest of the EU for the years 2015 to 2017.

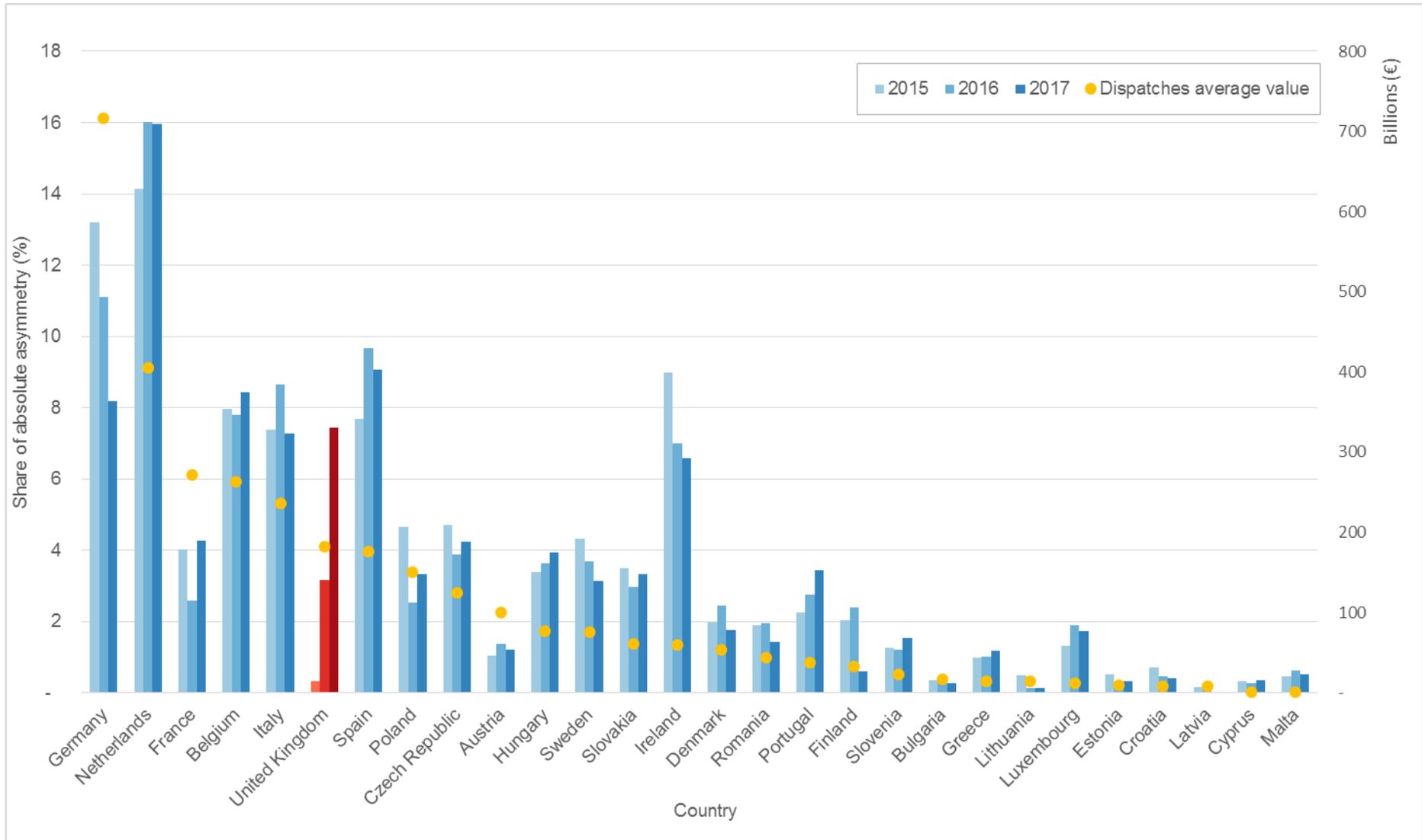
- France had the third largest average dispatches value within the EU between 2015 and 2017, their relative asymmetry has remained consistently low. In 2015 this was -2.1%, in 2016 this narrowed to -1.3%, in 2017 however this widened slightly to -2.2%.
- UK, Lithuania and Latvia all changed from a positive relative asymmetry in 2015 to a negative relative asymmetry in 2017. Most notably, in 2015 Lithuania had a relative asymmetry of 5.0%, in 2016 this narrowed to 1.2%, in 2017 this changed to -1.2%.
- Malta had the smallest average dispatches value, their relative asymmetry has consistently been the largest. In 2015 their relative asymmetry was -47%, in 2016 this widened to -52%, in 2017 however, this narrowed to -47%.
- In 2015 the UK's relative asymmetry was 0.3%, in 2016 this widened to -2.4%, in 2017 this widened further to -5.6%.

2.6 Dispatches: EU Member States average relative asymmetries and dispatches value

Graph 2.6 shows the dispatches relative average asymmetry (regardless of sign) between each EU Member State for the years 2015 to 2017, together with the average total trade value.

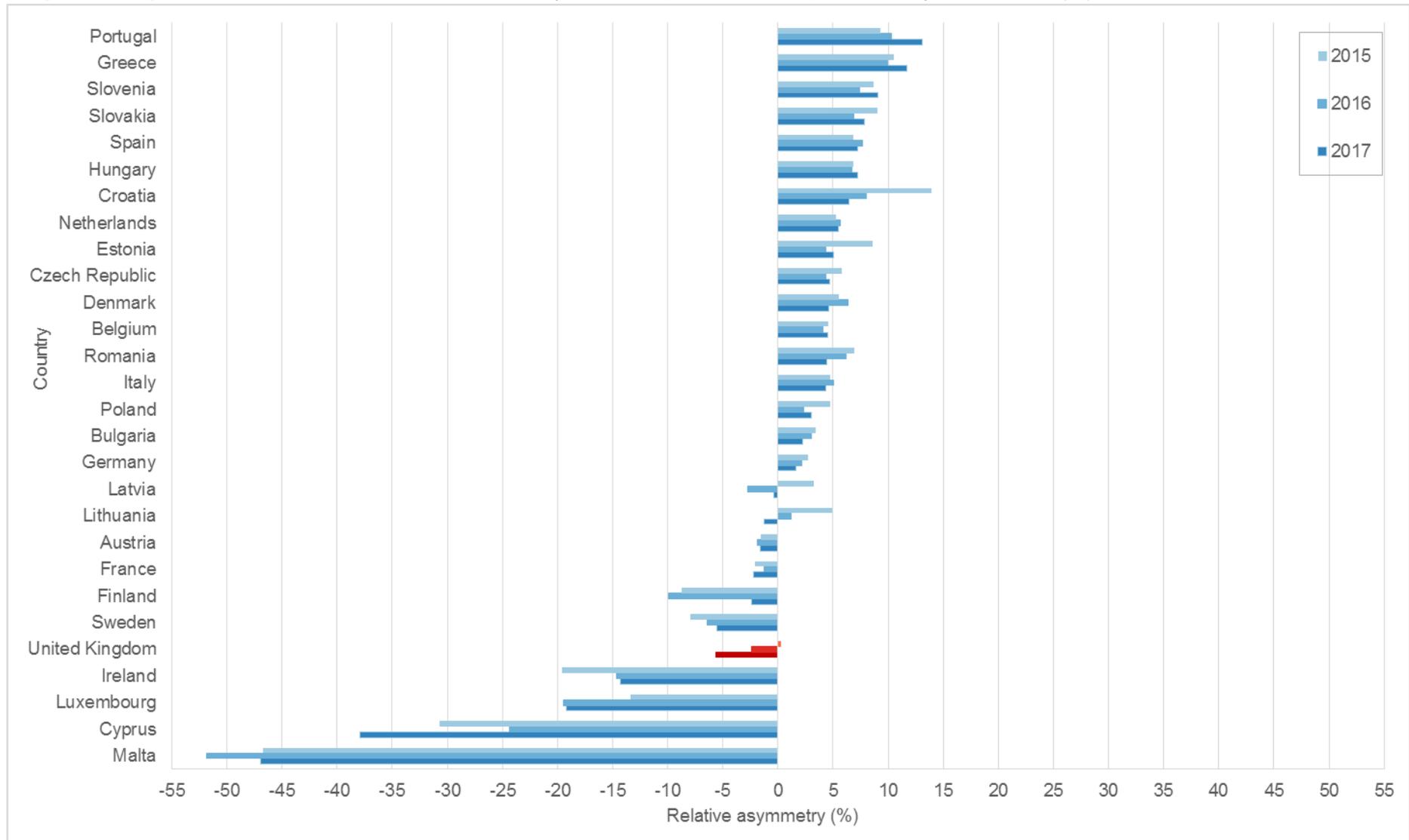
- Germany and Netherlands had the two largest average dispatches values. They had comparatively small average relative asymmetries.
- Cyprus and Malta had the two smallest average dispatches values. They had comparatively large average relative asymmetries.
- Latvia had one of the lowest average dispatches values (€7.8bn), however their average relative asymmetry was the lowest within the EU.
- The UK had the sixth largest average dispatches value (€182bn) and a comparatively low average relative asymmetry of 2.6%.

Graph 2.4 Dispatches: EU Member States share of absolute asymmetries, 2015 to 2017, ordered by dispatches average value



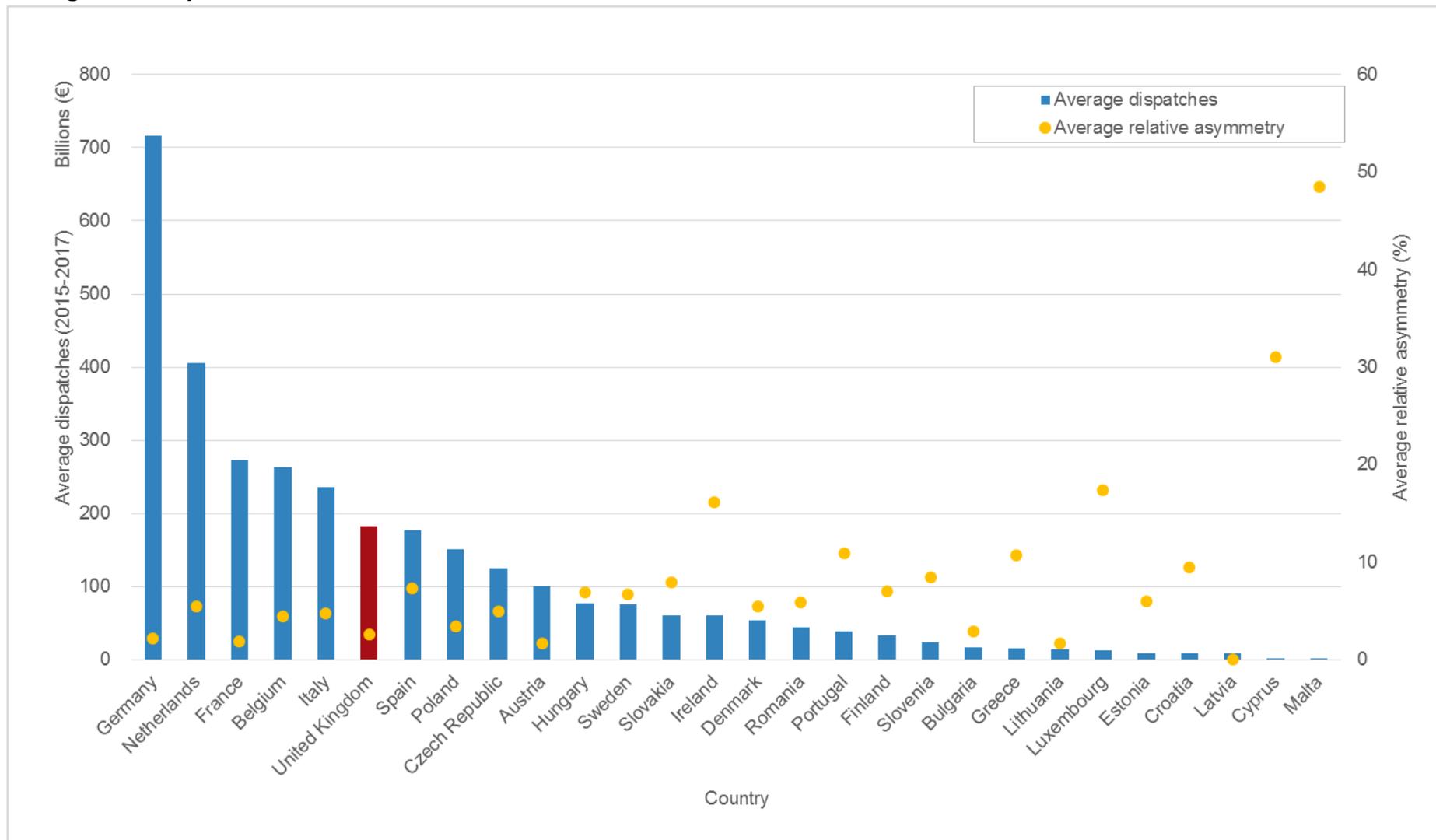
Source: Comext database, extracted October 2018

Graph 2.5 Dispatches: EU Member States relative asymmetries, 2015 to 2017, ordered by 2017 value (%)



Source: Comext database, extracted October 2018

Graph 2.6 Dispatches: EU Member States average total dispatches versus average relative asymmetries, 2015 to 2017, ordered by average total dispatches.



Source: Comext database, extracted October 2018

3. Trade in goods asymmetries between the UK and each EU Member State, 2015 to 2017

This section explores the asymmetries between the UK and EU Member States by trade value. It will focus on UK trade versus each of the EU Member States at the aggregate country level and explore the top ten goods (HS 2 chapters) behind the asymmetries.

3.1 Arrivals: UK asymmetries by partner country

Table 3.1 shows the asymmetries between UK reported arrivals from each EU Member State and its reported dispatches to the UK for the years 2015 to 2017.

- In 2015 the UK's total absolute asymmetry was €24,341m, in 2016 this increased to €31,838m, in 2017 this decreased slightly to €29,941m.
- Estonia, Croatia and Lithuania were among the five countries with the smallest total absolute asymmetry through all three years.
- Cyprus had the lowest asymmetry with the UK (€1.6m) in 2017. This decreased from €82m in 2015.
- The asymmetry between UK and Ireland showed the largest decrease between 2015 and 2017. In 2015 the asymmetry was €1,923m, in 2016 this decreased to €1,098m, in 2017 this decreased further to €447m.
- The asymmetry between UK and Italy showed the largest increase between 2015 and 2017. In 2015 the asymmetry was €651m, in 2016 this increased to €1,466m, in 2017 this increased further to €1,761m.

Table 3.1.1 shows the countries with the largest absolute asymmetries, for 2015, 2016 and 2017. Germany, Netherlands and Belgium remained in the top five, and subsequently in the same position (1st, 2nd and 3rd respectively) through all three years.

Table 3.1.1 Top 5 countries by largest absolute asymmetries for UK arrivals, 2015 to 2017

	2015	2016	2017
Rank	Country	Country	Country
1	Germany	Germany	Germany
2	Netherlands	Netherlands	Netherlands
3	Belgium	Belgium	Belgium
4	Ireland	France	Italy
5	Poland	Spain	Denmark

Table 3.1.2 shows the countries with the largest relative asymmetries, for 2015, 2016 and 2017. Malta, Croatia and Slovakia remained in the top five largest relative asymmetries by size through all three years. Malta had the largest relative asymmetry, and Croatia had the third largest for all three years.

Table 3.1.2 Top 5 countries by largest relative asymmetries for UK arrivals, 2015 to 2017

	2015	2016	2017
Rank	Country	Country	Country
1	Malta	Malta	Malta
2	Cyprus	Cyprus	Slovakia
3	Croatia	Croatia	Croatia
4	Slovakia	Latvia	Denmark
5	Estonia	Slovakia	Bulgaria

3.2 Arrivals: Top 10 chapters by share of total absolute asymmetry, 2015 to 2017

Table 3.2 shows the top ten arrivals products in order of their share of total absolute asymmetry for the years 2015 to 2017.

- Chapters consistently in the top ten through all three years were 84 (Mechanical appliances), 85 (Electronic equipment), 87 (Motor vehicles), 88 (Aircraft), 94 (Furniture and light fittings) and 99 (Other products). It is worth noting that Chapter 99 will often appear within both the absolute and relative asymmetry tables. Chapter 99 is used to capture ‘other products’. This may include low value consignments, where the goods have been aggregated and classified to a single commodity (9950 0000), and also includes mixed consignments of motor vehicles or aircraft parts (9990 8700). Goods delivered to and from offshore installations also fall within this category.
- In 2015 the top ten chapters accounted for 40% of the total absolute asymmetry for all chapters, in 2016 this increased to 51%, in 2017 this increased further to 55%.

3.3 Arrivals: Top 10 chapters by relative asymmetry, 2015 to 2017

Table 3.3 shows the top ten arrivals chapters by relative asymmetry for the years 2015 to 2017.

- Chapters consistently in the top ten through all three years were 85 (Electronic equipment), 84 (Mechanical appliances), 99 (Other products), 87 (Motor vehicles), 88 (Aircraft) and 94 (Furniture and light fittings)
- Chapter 99 (Other products) consistently had the largest relative asymmetry for all three years.

Table 3.1 Asymmetries between UK arrivals from the EU and EU dispatches to the UK, 2015 to 2017

Country	2015			2016			2017		
	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)
Germany	5,384.0	22.1	-6.2	7,521.5	23.6	-9.2	6,306.8	21.1	-7.8
Netherlands	5,062.4	20.8	-11.2	6,662.1	20.9	-14.6	4,874.5	16.3	-10.1
Belgium	3,304.7	13.6	-11.1	3,631.0	11.4	-12.0	3,690.4	12.3	-12.2
Italy	650.7	2.7	-3.0	1,465.7	4.6	-6.8	1,761.2	5.9	-7.9
Denmark	697.6	2.9	-13.7	784.6	2.5	-15.1	1,717.3	5.7	-26.2
Slovakia	918.4	3.8	-28.5	1,076.3	3.4	-29.8	1,634.2	5.5	-44.5
Spain	572.8	2.4	3.0	1,521.8	4.8	-7.7	1,616.3	5.4	-8.7
Czech Republic	855.1	3.5	-12.0	1,137.6	3.6	-16.0	1,397.2	4.7	-19.6
Poland	920.5	3.8	-7.9	1,003.6	3.2	-8.5	994.0	3.3	-7.9
France	419.3	1.7	1.3	1,742.6	5.5	-5.6	986.8	3.3	-3.2
Sweden	352.1	1.4	3.8	38.9	0.1	0.5	507.5	1.7	-6.2
Ireland	1,923.4	7.9	11.8	1,097.8	3.4	7.1	447.2	1.5	2.7
Hungary	124.8	0.5	-3.5	378.0	1.2	-10.9	353.7	1.2	-10.6
Romania	240.9	1.0	-10.7	377.9	1.2	-16.4	283.4	0.9	-11.7
Austria	167.4	0.7	-3.9	325.6	1.0	-8.0	274.6	0.9	-7.0

Table 3.1 Continued

Country	2015			2016			2017		
	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)
Portugal	131.6	0.5	-4.0	287.3	0.9	-8.5	203.6	0.7	-5.7
Bulgaria	80.7	0.3	-14.8	90.2	0.3	-16.5	138.0	0.5	-23.7
Finland	46.5	0.2	1.7	165.2	0.5	6.4	122.6	0.4	4.5
Greece	121.7	0.5	-11.7	104.8	0.3	-10.2	116.8	0.4	-11.0
Luxembourg	81.8	0.3	-11.7	35.1	0.1	-6.8	100.7	0.3	-20.0
Latvia	116.7	0.5	19.4	237.8	0.7	34.0	100.2	0.3	15.5
Slovenia	99.0	0.4	-20.0	85.4	0.3	-16.2	97.5	0.3	-18.6
Lithuania	46.3	0.2	4.4	9.4	0.0	-1.0	89.1	0.3	-10.1
Malta	124.0	0.5	65.8	136.7	0.4	78.3	80.8	0.3	68.7
Croatia	74.7	0.3	-44.7	52.1	0.2	-35.4	76.0	0.3	-44.2
Estonia	70.0	0.3	-24.0	4.7	0.0	1.6	23.5	0.1	-8.5
Cyprus	81.9	0.3	48.5	112.4	0.4	-42.2	1.6	0.0	0.9
Unallocated	1,671.5	6.9	200.0	1,752.0	5.5	200.0	1,945.7	6.5	200.0
Total	24,340.5	100.0	-4.4	31,838.3	100.0	-8.2	29,941.1	100.0	-8.6

Source: Comext database, extracted October 2018

Table 3.2 Top 10 arrivals chapters by share of total absolute asymmetry, 2015 to 2017

2015			2016			2017		
Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)
85	2,606.8	10.9	87	4,663.8	13.8	85	4,125.5	12.7
84	1,318.6	5.5	85	3,379.1	10.0	84	3,421.9	10.5
99	1,257.7	5.3	88	2,099.6	6.2	87	3,389.3	10.4
87	1,039.9	4.4	84	1,794.3	5.3	27	1,494.5	4.6
88	627.6	2.6	99	1,178.3	3.5	88	1,415.5	4.4
94	614.4	2.6	30	1,072.4	3.2	99	1,104.4	3.4
89	602.4	2.5	94	863.6	2.6	90	853.6	2.6
73	578.9	2.4	90	818.6	2.4	86	658.5	2.0
40	507.1	2.1	39	671.6	2.0	61	651.7	2.0
30	458.8	1.9	27	660.1	2.0	94	639.8	2.0
Sum of top 10	9,612.2	40.3	Sum of top 10	17,201.3	51.0	Sum of top 10	17,754.6	54.6
Unallocated	3,251.8	13.6	Unallocated	4,541.5	13.5	Unallocated	2,667.7	8.2
Sum of others	10,990.8	46.1	Sum of others	11,989.3	35.5	Sum of others	12,115.9	37.2
Total	23,854.8	100.0	Total	33,732.0	100.0	Total	32,538.2	100.0

Source: Comext database, extracted October 2018

Chapter names:

85 - Electronic equipment	94 - Furniture and light fittings	90 - Measuring devices and gauges
84 - Mechanical appliances	89 - Ships, boats and floating structures	39 - Plastics and plastic products
99 - Other products	73 - Articles of iron or steel	27 - Mineral fuels
87 - Motor vehicles	40 - Rubber and articles thereof	86 - Trains and track fixtures
88 - Aircraft	30 - Pharmaceutical products	61 - Knitwear

Table 3.3 Top 10 arrivals chapters by relative asymmetry, 2015 to 2017

2015			2016			2017		
Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)	Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)	Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)
99	1,257.7	146.4	99	1,178.3	139.5	99	1,104.4	149.2
89	602.4	143.5	93	346.7	116.4	14	6.2	98.2
93	388.9	119.1	89	510.7	114.8	89	635.2	78.1
26	325.0	84.2	97	208.9	80.9	93	251.2	67.1
47	186.6	46.7	26	340.8	77.3	66	10.3	63.3
03	415.1	45.4	66	9.5	57.4	46	4.3	52.1
66	7.0	42.4	46	4.7	46.6	63	245.5	50.4
86	202.1	38.0	24	170.6	43.7	86	658.5	48.6
14	2.7	37.0	03	427.6	42.9	26	229.7	48.1
63	163.7	35.8	63	199.5	42.2	47	136.7	39.1
Sum of top 10	3,551.2	82.2	Sum of top 10	3,397.4	81.4	Sum of top 10	3,282.1	70.9
Unallocated	3,251.8	-200.0	Unallocated	4,541.5	-200.0	Unallocated	2,667.7	-200.0
Sum of others	17,051.8	5.6	Sum of others	25,793.2	8.7	Sum of others	26,588.5	8.8
Total	23,854.8	7.7	Total	33,732.0	11.1	Total	32,538.2	10.6

Source:Comext database, extracted October 2018

Chapter names:

99 - Other products	3 - Fish and shellfish	97 - Art and antiques
89 - Ships, boats and floating structures	66 - Umbrellas	46 - Wickerwork and basketwork
93 - Arms and ammunition	86 - Trains and track fixtures	24 - Tobacco
26 - Ores	14 - Other vegetable products	
47 - Waste paper and wood pulp	63 - Other textile goods	

3.4 Dispatches: UK asymmetries by partner country

Table 3.4 shows the asymmetries between UK reported dispatches to each EU Member State and its reported arrivals for the years 2015 to 2017.

- In 2015 the UK's total absolute asymmetry was €13,485m, in 2016 this decreased to €12,030m, whereas in 2017 this increased to €14,056m.
- Cyprus and Bulgaria were among the five countries with the smallest total absolute asymmetry through all three years.
- Latvia had the lowest asymmetry with the UK in 2017 with €9.8m despite increasing from €4.2m in 2015.
- The asymmetry between UK and Germany had the largest decrease between 2015 and 2017. In 2015 the asymmetry was €1,606m, in 2016 this decreased to €296m, in 2017 this decreased further to €66m. The overall decrease between the years was €1,540m.
- The asymmetry between UK and the Netherlands had the largest increase between 2015 and 2017. In 2015 the asymmetry was €427m, in 2016 this increased to €1,146m, in 2017 this increased further to €1,738m. The overall increase between the years was €1,311m.

Table 3.4.1 shows the countries with the largest absolute asymmetries for 2015, 2016 and 2017. France and Belgium were among the top five countries for all three years, of which France remained the largest through all three years.

Table 3.4.1 Top 5 countries by largest absolute asymmetries for UK dispatches, 2015 to 2017

	2015	2016	2017
Rank	Country	Country	Country
1	France	Belgium	France
2	Spain	France	Netherlands
3	Germany	Netherlands	Czech Republic
4	Belgium	Czech Republic	Belgium
5	Ireland	Sweden	Slovakia

Table 3.4.2 shows the countries with the largest relative asymmetries for 2015, 2016 and 2017. Lithuania, Slovakia and Malta were among the top five countries for all three years.

Table 3.4.2 Top 5 countries by largest relative asymmetries for UK dispatches, 2015 to 2017

	2015	2016	2017
Rank	Country	Country	Country
1	Lithuania	Slovakia	Slovakia
2	Slovakia	Lithuania	Czech Republic
3	Luxembourg	Czech Republic	Lithuania
4	Slovenia	Malta	Malta
5	Malta	Slovenia	Estonia

3.5 Dispatches: Top 10 chapters by share of total absolute asymmetry, 2015 to 2017

Table 3.5 shows the top ten dispatches chapters by share of total absolute asymmetry between the years 2015 and 2017.

- Chapters consistently in the top ten through all three years were 88 (Aircraft), 85 (Electrical equipment), 30 (Pharmaceutical products), 99 (Other products), 27 (Mineral fuels) and 62 (Clothes, not knitted)
- In 2015 the top ten chapters accounted for 54% of the total absolute asymmetry for all chapters, in 2016 this increased to 60%, in 2017 this increased further to 69%.

3.6 Dispatches: Top 10 chapters by relative asymmetry, 2015 to 2017

Table 3.6 shows the top ten dispatches chapters by relative asymmetry between the years 2015 and 2017.

- Chapters consistently in the top ten through all three years were 93 (Arms and ammunition, 99 (Other products), 80 (Tin and articles thereof), 26 (Ores), 67 (Feather and hair articles), 08 (Fruit and nuts).
- Chapters 93 (Arms and ammunition, 99 (Other products), 80 (Tin and articles thereof), 26 (Ores), have remained in 1st, 2nd, 3rd and 4th place respectively throughout all three years.

Table 3.4 Asymmetries between UK dispatches to the EU and EU arrivals from the UK, 2015 to 2017

Country	2015			2016			2017		
	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)
France	2,292.7	17.0	9.8	1,885.2	15.7	8.3	2,500.1	17.8	-8.9
Netherlands	427.3	3.2	1.8	1,146.0	9.5	-4.9	1,738.1	12.4	-6.9
Czech Republic	624.4	4.6	-20.7	1,051.8	8.7	-33.4	1,665.7	11.8	-50.9
Belgium	1,243.1	9.2	-7.5	2,104.7	17.5	-13.8	1,651.5	11.7	-10.0
Slovakia	421.0	3.1	-51.4	703.6	5.8	-70.6	1,237.1	8.8	-94.9
Sweden	819.6	6.1	-12.6	967.6	8.0	-15.9	958.4	6.8	-14.8
Spain	1,670.2	12.4	-12.9	560.1	4.7	-4.6	651.9	4.6	-5.3
Austria	243.3	1.8	-10.5	444.7	3.7	-18.3	366.4	2.6	-15.8
Lithuania	378.0	2.8	-67.4	278.4	2.3	-51.8	305.4	2.2	-38.9
Italy	696.5	5.2	6.2	597.2	5.0	5.2	295.4	2.1	2.6
Romania	208.4	1.5	-14.2	266.1	2.2	-19.0	272.4	1.9	-17.6
Ireland	1,062.3	7.9	4.7	147.4	1.2	0.7	214.9	1.5	-1.0
Finland	84.7	0.6	4.7	90.5	0.8	-5.4	211.0	1.5	-12.7
Hungary	173.3	1.3	10.4	13.9	0.1	-0.8	204.5	1.5	-11.6
Malta	100.4	0.7	21.4	132.2	1.1	32.0	184.9	1.3	37.5

Table 3.4 Continued

Country	2015			2016			2017		
	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Relative asymmetry (%)
Denmark	337.4	2.5	-10.2	154.1	1.3	-5.0	108.6	0.8	-3.4
Estonia	49.5	0.4	-15.1	50.9	0.4	-16.4	86.5	0.6	-26.1
Poland	167.9	1.2	-3.3	20.7	0.2	-0.4	85.1	0.6	1.5
Slovenia	73.5	0.5	-23.4	69.0	0.6	-20.7	70.8	0.5	-20.4
Greece	40.5	0.3	-3.3	117.8	1.0	-10.1	69.6	0.5	-6.1
Germany	1,606.0	11.9	3.9	295.5	2.5	0.8	66.3	0.5	0.2
Portugal	173.2	1.3	-9.6	47.5	0.4	-2.7	62.9	0.4	-3.4
Croatia	18.3	0.1	-9.2	10.2	0.1	-4.9	47.5	0.3	-19.7
Bulgaria	3.0	0.0	-0.6	1.5	0.0	-0.3	44.6	0.3	9.0
Cyprus	29.3	0.2	-5.6	5.8	0.0	1.5	25.9	0.2	6.2
Luxembourg	71.5	0.5	26.8	25.4	0.2	10.4	19.7	0.1	6.7
Latvia	4.2	0.0	-1.4	26.3	0.2	-8.7	9.8	0.1	-2.4
Unallocated	465.3	3.5	200.0	816.1	6.8	200.0	901.1	6.4	200.0
Total	13,484.5	100.0	0.3	12,030.3	100.0	-2.8	14,056.3	100.0	-6.1

Source: Comext database, extracted October 2018

Table 3.5 Top ten dispatches chapters by share of total absolute asymmetry, 2015 to 2017

2015			2016			2017		
Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)	Chapter	Absolute asymmetry (€m)	Share of total absolute asymmetry (%)
88	2,691.2	12.2	88	4,410.3	19.8	84	6,094.1	19.6
85	2,307.8	10.5	85	3,333.2	14.9	88	4,569.1	14.7
30	1,432.5	6.5	99	1,474.9	6.6	85	3,771.4	12.1
99	1,228.9	5.6	27	883.4	4.0	27	1,580.6	5.1
27	877.2	4.0	38	656.0	2.9	99	1,549.3	5.0
87	823.0	3.7	30	649.8	2.9	71	1,181.7	3.8
62	749.2	3.4	62	634.2	2.8	38	849.7	2.7
40	629.8	2.9	87	606.6	2.7	62	715.9	2.3
61	559.5	2.5	61	449.3	2.0	30	576.9	1.9
71	559.3	2.5	94	385.3	1.7	94	503.8	1.6
Sum of top 10	11,858.4	53.8	Sum of top 10	13,483.1	60.4	Sum of top 10	21,392.4	68.7
Unallocated	2,950.0	13.4	Unallocated	2,824.1	12.7	Unallocated	3,056.1	9.8
Sum of others	7,225.4	32.8	Sum of others	5,998.0	26.9	Sum of others	8,089.7	21.5
	22,033.9	100.0	Total	22,305.1	100.0	Total	31,126.9	100.0

Source: Comext database, extracted October 2018

Chapter names:

88 - Aircraft	87 - Motor vehicles	38 - Miscellaneous chemical products
85 - Electronic equipment	62 - Clothes, not knitted	94 - Furniture and light fittings
30 - Pharmaceutical products	40 - Rubber and articles thereof	84 - Mechanical appliances
99 - Other products	61 - Knitwear	
27 - Mineral fuels	71 - Precious metals	

Table 3.6 Top ten dispatches chapters by relative asymmetry, 2015 to 2017

2015			2016			2017		
Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)	Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)	Chapter	Absolute asymmetry (€m)	Relative asymmetry (%)
93	151.1	129.6	93	159.2	152.9	93	189.9	138.4
99	1,228.9	127.4	99	1,474.9	130.6	99	1,549.3	130.1
80	43.4	105.6	80	43.2	117.1	80	44.5	122.5
26	56.5	77.1	26	121.4	115.9	26	122.1	111.3
67	16.5	69.9	88	4,410.3	64.6	24	90.1	91.7
47	103.9	65.6	57	93.6	61.6	14	3.0	71.3
57	94.2	58.1	08	209.8	59.1	50	8.5	62.7
08	196.0	57.1	47	95.0	58.9	88	4,569.1	62.2
66	6.1	50.1	53	9.8	54.0	08	236.2	60.0
79	48.6	48.3	67	13.8	53.9	67	15.3	56.5
Sum of top 10	1,945.3	97.5	Sum of top 10	6,631.0	74.4	Sum of top 10	6,827.9	73.0
Unallocated	2,950.0	-200.0	Unallocated	2,824.1	-200.0	Unallocated	3,056.1	-200.0
Sum of others	17,138.5	9.5	Sum of others	12,850.0	7.7	Sum of others	21,242.8	11.8
	22,033.9	12.0	Total	22,305.1	12.6	Total	31,126.9	16.2

Source: Comext database, extracted October 2018

Chapter names:

93 - Arms and ammunition	47 - Waste paper and wood pulp	88 - Aircraft
99 - Other products	57 - Carpets	53 - Other vegetable textile fibres
80 - Tin and articles thereof	8 - Fruit and nuts	24 - Tobacco
26 - Ores	66 - Umbrellas	14 - Other vegetable products
67 - Feather and hair articles	79 - Zinc and articles thereof	50 - Silk

Annex 1: Measures of asymmetry

There are two types of asymmetries for trade in goods that are referred to in this report: the **arrivals asymmetry** and the **dispatches asymmetry**.

The **arrivals asymmetry** is the difference between the declarant country's arrivals from the partner country and the partner country's dispatches to the declarant country. If this asymmetry is positive it means that the declarant country's arrivals from the partner country are greater than the partner country's dispatches to the declarant country.

The **dispatches asymmetry** is the difference between the declarant country's dispatches to the partner country and the partner country's arrivals from the declarant country. If this asymmetry is positive it means that the declarant country's dispatches to the partner country are greater than the partner country's arrivals from the declarant country.

As an example, the UK's arrivals asymmetry with China is the difference between what the UK records as arrivals from China and what China records as dispatches to the UK. If the value of UK arrivals minus China dispatches is negative, it suggests that the UK is recording less goods as received from China, than China is recording as exported to the UK.

If we use D to represent the declarant country and P to represent the partner country, we can set out the main indicators used to calculate the asymmetry. Note that for the purposes of this report the UK will always be the declarant.

Indicators of Asymmetry

(1) Absolute Asymmetry:

$$= | \text{Value (D)} - \text{Value (P)} |$$

This is the absolute difference between the value of recorded by the declarant and their partner country (mirror value).

(2) Relative Asymmetry (%):

$$= \frac{\text{Value (D)} - \text{Value (P)}}{0.5 (\text{Value (D)} + \text{Value (P)})} \times 100$$

The relative asymmetry looks at the difference between the value reported by the declarant country and the value reported by the partner country with respect to the mean of those two flows. This method makes no assumption about which value (D or P) is the correct value and instead looks at the asymmetry with respect to the average of the two values shown in percent.

(3) Share of Total Absolute Asymmetry (%):

$$= \frac{| \text{Value (D)} - \text{Value (P)} |}{\sum | \text{Value (D)} - \text{Value (P)} |} \times 100$$

This percentage dictates the contribution a country or HS¹ Chapter is having on the absolute total of the asymmetries within a certain flow, e.g. Chapter 45 may be responsible for 10 per cent of the total UK arrivals asymmetry.

Note: The values used within the tables in this report are quoted in US Dollars. UK declarations are made in pounds sterling and converted to US dollars by UN Comtrade. The data that UN Comtrade receives from each country is compiled in the local currency and is then converted to US Dollars using a monthly exchange rate.

Unallocated trade: Whilst the vast majority of trade declared between countries provides detail at value, product and country levels, there is provision for countries to apply suppressions.

For trade reported by the declarant (UK arrivals and dispatches), there is some trade 'not allocated' to a country. For example 'countries & territories not specified in the framework of Intra-Community trade' and 'countries & territories not specified for commercial or military reasons in the framework of Intra-Community trade' are identified as 'unallocated'.

For trade reported by our partners (arrivals and dispatches), the chapter total does not add up to the country total and is therefore referred to as unallocated.

¹ HS Chapter as defined in the UN Comtrade database