Weighing up Future Food Security in the UK

The Impact of the Brexit on Food & Agribusiness in Europe and Beyond

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Summary

The potential impact of the Brexit on food & agriculture (F&A) companies in and outside the UK is huge. The future trade policy of the UK with the EU and the rest of the world will be the subject of negotiations in the coming years, with an uncertain outcome. This note explores the impact of three scenarios for future British trade policy, depending on the different levels of future tariffs: freezing today's trade flows, the protectionist scenario, and a free-trade scenario called the Great Global Britain scenario.

The UK is a large net importer of agricultural products, with total annual F&A imports amounting to GBP 47.5bn. The UK's top three imports are: animal protein, fresh produce, and consumer foods. The EU is the UK's largest supplier of imported agricultural products with the Netherlands, France, Spain, Germany, and Ireland ranking highest in these trade flows. As import tariffs on agricultural products are relatively high, trade flows will be heavily influenced by the introduction of import tariffs.

Beyond tariffs, two other issues will influence the future of F&A trade between the UK and the EU. The free movement of workers between the UK and the EU is expected to be affected by the Brexit. This could impact the F&A sector more than other sectors, as, on average, 32 percent of British F&A workers come from EU countries. Furthermore, the relative strength of the British pound will impact trade flows, while British farmer incomes can benefit from a weaker pound as farmers improve competitiveness with regard to imports. In fact, the weakening of the pound potentially makes up a part of the potential loss of direct income support from the EU after the Brexit.

Net food importer leaves the EU internal market

The UK's decision to leave the European Union could have a significant impact on many companies in food & agribusiness, both in and outside the UK. The departure from the EU internal market regulated by the Common Agricultural Policy (CAP)—with instruments such as import tariffs, export subsidies, and direct income support—can have a significant impact on trade in agricultural products to and from the UK, and can therefore impact agricultural production in both the UK and the EU. The UK needs to negotiate a new trade regime with the EU and other countries, and develop a new agricultural policy. These changes have a significant impact, as the UK is the second-largest economy in Europe after Germany—both measured in GDP and population—and therefore has a high demand for food and beverages. The British government needs to ensure this demand is met (*see Table 1*). Typically, the UK's agricultural sector is relatively small compared to other European countries, with an output value of only EUR 28bn, which is comparable to that of the (much smaller) Netherlands. As a result, the UK is not self-sufficient with regard to food. The country's domestic agricultural sector supplies approximately 60 percent of total UK food demand, while the UK relies on imports for a significant part of its food needs. Currently, the UK imports most of its food from the EU. Over time, other (non-EU) countries may increase their share in British food imports, because these countries could come on a more equal footing with EU countries after the Brexit.

Table 1: Economic parameters of the most important EU countries

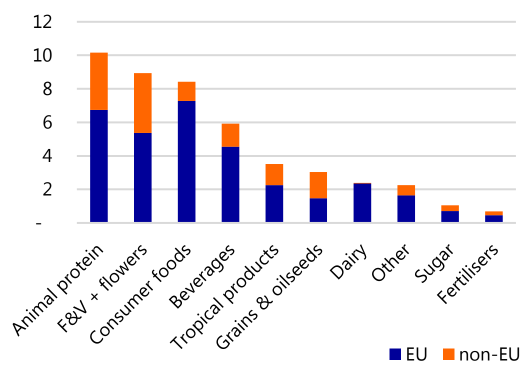
Country	*GDP (USD billion) 2014*	*Population (million) 2015*	*Output agricultural 'industry' (EUR billion) 2016*
Germany	3,868	81	50
United Kingdom	2,989	65	28
France	2,829	64	70
Italy	2,141	60	53
Spain	1,381	46	46
Netherlands	879	17	27

Source: FAOSTAT, Eurostat, Rabobank 2017

Total trade of GBP 70bn at stake

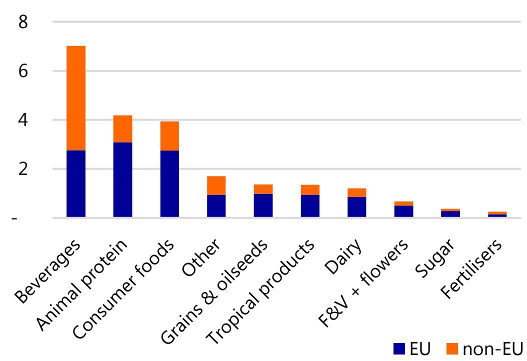
Today, the EU is the UK's most important trading partner for F&A products. In 2016, F&A imports to the UK amounted to GBP 47.5bn, of which GBP 33.6bn, or 71 percent, originated from EU countries. The most imported product category is animal protein, followed by fruits, vegetables & flowers, consumer foods, and beverages (*see Figure 1*). British F&A exports in the same year amounted to GBP 22.5bn, of which GBP 13.6bn, or 60 percent, was destined for EU countries. The most important British export category is beverages, followed by animal protein and consumer foods. Due to the relatively small size of the UK's agricultural sector, the share of food & agricultural products in total trade is relatively small. In 2016, this share made up 7 percent of British exports and 10 percent of British imports. Furthermore, trade origins and destinations in F&A differ from those of total trade. EU countries make up half of trade for all products, but two-thirds of trade in F&A products.

Figure 1: British F&A imports, GBP billion, 2016



Source: HMRC, Rabobank 2017

Figure 2: British F&A exports, GBP billion, 2016



Source: HMRC, Rabobank 2017

Looking at the most important product categories the UK imports, a few categories stand out (*see Table 2*). These are: fresh produce from the Netherlands and Spain; beverages from France, Italy, and the Netherlands; consumer foods from several origins; Dutch poultry (including eggs); Irish beef; Irish dairy products; and tropical products from Germany. On the other hand, the UK has significant export interests to the EU market for the following products: beverages, consumer foods, seafood, tropical products, other animal protein products, dairy products, grains & milling products, and fresh produce. All product-origin combinations represent over GBP 500m in value.

Table 2: Value of the most important F&A trade flows between the UK and the EU

Value of EU-UK trade flow	*Product origin (the value of the trade flow in million GBP is mentioned between brackets)*
> GBP 1bn	UK beverages (2,761); UK consumer foods (2,741, of which 100 frozen potato products); Dutch F&V, flowers (1,853); Spanish F&V, flowers (1,653); French beverages (1,350); UK seafood (1,183); Dutch consumer foods (1,172, of which 219 frozen potato products); German consumer foods (1,100)
GBP 750m – GBP 1bn	Irish consumer foods (974); tropical products from the UK (944); UK other animal protein products (867); UK dairy products (851); Italian beverages (846); French consumer foods (820); Italian consumer foods (803); Belgium consumer foods (765, of which 124 frozen potato products); Irish beef (752)
GBP 500m - GBP 750m	UK grains & milling products (680); Dutch poultry (643); Irish dairy products (593); Dutch beverages (575; UK F&V, flowers (505); tropical products from Germany (501)
GBP 250m - GBP 500m	Danish pork (479); Spanish consumer foods (456); French dairy products (451); Italian other animal protein products (432); UK beef (421); German F&V, flowers (438); Irish pork (383); Dutch oilseed products (376); UK poultry (377); German beverages (375); tropical products from the Netherlands (368); tropical products from Poland (353); French F&V, flowers (347); Danish consumer foods (319); Belgian beverages (306); UK oilseed products (305); German dairy products (303); Spanish beverages (302); Polish consumer foods (298); Belgian F&V, flowers (289); Icelandic seafood (285); UK sugar & confectionery (282); tropical products from France (281); German pork (265); Dutch pork (263); Italian F&V, flowers (258); tropical products from Belgium (251)
GBP 100m - GBP 250m	Polish poultry (244); Irish beverages (236); UK pork (235); seafood from the Faroe Islands (213); German seafood (212); Greek other animal protein products (201); Dutch dairy products (197); Irish poultry (197); Irish F&V, flowers (191); tropical products from Ireland (185); Danish dairy products (182); French grains & milling products (178); Italian dairy products (175); Polish other animal protein products (171); Polish F&V, flowers (164); Belgian sugar (153); German poultry (150); Belgian dairy products (142); UK fertiliser (142); Swedish seafood (142); French sugar (141); Dutch fertiliser (137); tropical products from Italy (128); French oilseed products (120); Spanish olive oil (119); Dutch seafood (119); Swedish beverages (115); Dutch sugar (110); Latvian other animal protein products (108); Norwegian seafood (108); Austrian beverages (108); German sugar (105); German grains & milling products (102); Greek consumer foods (101); Polish pork (100)

Source: HMRC, Rabobank 2017

Uncertain outcome of trade policy negotiations

To assess the impact of the Brexit on future trade flows, it is key to develop a view as to what future UK trade policy will look like. This policy will be subject to intensive negotiations between the UK and its trading partners in the coming years.

The first step in the negotiations is that the UK will have to establish a schedule of commitments that needs to be negotiated with all 126 WTO members. This schedule lists which import tariffs the UK can apply to imports (the most-favoured nation, or MFN, tariffs). This schedule also lists for which trade volumes the UK will grant market access at lower, or zero, tariffs (so-called tariff rate quota) to other countries, how much domestic support the UK can give to its domestic agricultural sector, and what market access the UK will be granted by other countries.

Second, the UK will develop its own trade policy, e.g. preferential trade agreements with other countries, a customs union with the EU, etc. Such trade policy needs to fit into the schedule of commitments. Under WTO rules, the trade preferences laid down in WTO schedules are the starting point in negotiations about trade policies. Trading partners can agree to grant trade preferences in bilateral or multilateral trade agreements that go further than the WTO schedules. Any deviation from WTO schedules in the direction of less trade will have to be compensated with more trade elsewhere. This exchange can also take place between F&A and other sectors.

Though F&A only represents a relatively small part of British trade, it will feature more prominently in the trade negotiations. That's because most tariffs in F&A are relatively high, and food security is a sensitive topic for most trading partners. The EU will have an interest in maintaining access to the British market, while the UK will no longer only have to look to the EU for its food needs. At the same time, two wild cards could shape the negotiations: first, consumer responses to food price inflation—in combination with increased price volatility—as the UK may become more vulnerable to world market price volatility. Second, the need for support to local food manufacturers (including the issue of labour availability) and farmers, who will need some kind of replacement for EU direct income support and market stabilisation measures.

Our expectation is that the UK's default import tariffs will most likely become the EU's MFN tariffs, as laid down in the EU schedule of WTO commitments. Besides that, the UK will likely grant additional market access to its trading partners based on existing EU trade commitments to third countries, which partly need to be taken over by the UK. Finally, the big question is: What will happen to the biggest trade flow, between the UK and the EU? We can think of three scenarios for the outcome of EU-UK trade negotiations (*see Figure 3*).

Figure 3: Scenarios for the outcome of EU-UK trade negotiations

Source: Rabobank, 2017

The scenarios in Figure 3 are more or less extremes. It is most likely that the final outcome will be a complicated mix of all three scenarios. However, the UK has a history of promoting the third scenario, which it pursued prior to joining the EU. Therefore, this scenario may be less extreme than it sounds in the ears of continental Europeans.

Additionally, the UK will have to commit to a ceiling for domestic support to agriculture. This is an EU-UK negotiation, in which the EU support ceiling needs to be split between the EU and the UK. This will not be a very sensitive negotiation, as the EU ceiling is high, compared to today's support levels. And one final consideration concerning trade relates to the non-tariff barriers that could be introduced by the British government following Brexit, for example on biosecurity. Such non-tariff barriers could add several percentage points to prices through additional transaction costs.

Impact of the scenarios varies

In order to assess how EU-UK trade will be impacted by the various scenarios, it is necessary to look at the following variables:

1. the MFN tariffs that will apply to EU-UK trade
2. the potential to replace EU imports with domestic production
3. the potential to replace EU imports with imports from alternative suppliers

In *Table 3*, we provide an overview of MFN tariffs for the various product groups.

Table 3: MFN import tariffs which the UK can apply to imports after Brexit

Product category	*Tariff level*
Dairy products, beef, sugar	High (>30%)
Pork, poultry, seafood, eggs, fruit & vegetables, grains, consumer foods	Medium (10%-30%)
Flowers, fertilisers, oilseeds, beverages, tropical products	Low (<10%)

Source: International Trade Centre, Rabobank 2017

We elaborate on the second and third variable in the following section, and assess the impact on trade for each F&A product group. Numbers are based on British customs data and relate to the calendar year 2016.

Animal protein (GBP 10.2bn imports)

Seafood (GBP 3.1bn imports)

With GBP 3.1bn of fishery product imports, the UK has a particularly low self-sufficiency of only 55 percent. With the notable exception of the Scottish salmon industry, many key seafood species lack domestic production, such as tropical shrimps and tuna, while others, such as cod and haddock, are markets in which imports account for the majority of consumption. Seafood imports are split between approximately one-third from the Nordic non-EU countries (Iceland, the Faroe Islands, and Norway), one-third from Asia, and one-third from EU countries. However the EU is the biggest market for UK seafood exports, with a share of 70 percent in total exports and a value of GBP 1.2bn. The protectionist scenario would have a negative impact on UK seafood exports to the EU, in addition to EU exports to the UK—predominantly coming from Germany, Denmark, Sweden, and the Netherlands. The free-trade scenario would leave both UK and EU exports relatively untouched.

One of the key issues in relation to seafood and the Brexit will be the allocation of fishing rights in British waters, currently managed under the EU's Common Fisheries Policy. These waters will no longer be freely accessible for European fishing boats unless the EU strikes a deal with the UK about access to British waters. As a result, the fishing industries in the Netherlands, France, Denmark, Ireland, etc. are at risk of losing access to important fishing waters, while British fishermen will also lose access to EU fishing stocks. How much British fishermen can benefit from less competition in British waters will depend on the capacity to process additional catch in the UK.

Poultry and eggs (GBP 2.1bn imports)

Although self-sufficiency of poultry and eggs in the UK is higher than for other meats—73 percent for poultry and 88 percent for eggs—imports still amount to GBP 2.1bn. Also, poultry meat imports from outside the EU make up 20 percent of all imports. This third-country import can be expected to increase significantly in the free-trade scenario, following the elimination of import tariffs. The protectionist scenario will also negatively impact imports from the EU, but domestic production growth will not fill the gap soon. Therefore, imports will have to continue to meet demand, although domestic prices may rise.

In 2016, the Netherlands supplied 30 percent of imports, followed by Poland, with a share of 12 percent. Around 70 percent of British poultry exports go to EU countries, with a value of GBP 377m.

Pork (GBP 1.8bn imports)

Almost 60 percent of British pork consumption is imported. Total pork imports amount to GBP 1.8bn, with almost 100 percent originating in EU countries. Again, sourcing from non-EU countries such as the US, Canada, and Brazil may well increase under the free-trade scenario, as the elimination of import tariffs will remove a significant trade barrier. On the other hand, under the protectionist scenario, pork will become a scarce item in the UK, due to its low self-sufficiency.

The most impacted pork suppliers to the UK are Denmark, Ireland, Germany, and the Netherlands, together supplying 77 percent of all British imports. The UK's pork exports are significantly lower than its pork imports. Exports to EU countries amount to GBP 235m, 60 percent of the UK's exports.

Beef (GBP 1.2bn imports)

The UK imports slightly over a third of its beef consumption. Total beef imports amount to GBP 1.2bn, of which 83 percent originates from EU countries. Typically, import tariffs on beef are high, some 40 percent to 60 percent. Therefore, a protectionist scenario would reduce trade significantly, and beef prices in the UK would increase significantly, most likely having a negative impact on consumption. Under the free-trade scenario, third countries suddenly will have much easier access to the UK market, because of the high EU tariffs that would disappear.

The Irish beef industry will be impacted most, with a 63 percent share in UK imports in 2016. Moreover, from an Irish perspective, half of beef exports go to the UK, which means the Irish beef industry is very sensitive to changes in trade with the UK.

The EU is the largest export market for the UK's beef sector. The value of British beef exports to EU countries amounts to GBP 421m, 92 percent of UK beef exports.

Other animal protein products (GBP 2.0bn)

Other animal protein products make up GBP 2bn in imports, 69 percent of which originates from the EU. Italy is the main supplier, with GBP 0.4bn, followed by Greece, with GBP 0.2bn. British exports of other animal protein products amount to GBP 1.1bn, 76 percent of which is destined for the EU.

Fruit, vegetables, and flowers (GBP 8.9bn imports)

The UK's self-sufficiency for fruit & vegetables is estimated to be below 40 percent, and for flowers, it is even lower. Total imports amount to GBP 8.9bn. Import tariffs for fruit, vegetables, and flowers are typically low. Therefore, trade diversion effects of leaving the EU will be relatively small—even more so because there are no alternative suppliers who can supply the required volumes and quality year-round, for products such as tomatoes, cucumbers, and peppers.

Nevertheless, EU suppliers will face a significant hurdle when exporting to the UK in the protectionist scenario, with a 5 percent to 10 percent import tariff for flowers and 15 percent to 20 percent for fruit & vegetables. This tariff will most likely result in a similar increase in domestic prices, negatively impacting consumption. An increase in domestic investments can be expected—for example, in tomato or mushroom production.

The Netherlands and Spain will be the most impacted trading partners, with a total value of imports of GBP 1.9bn and GBP 1.7bn, respectively, representing a combined 65 percent of EU imports. From a Dutch perspective, the UK is the second export market for horticultural products, with a 10 percent to 15 percent share in exports. For Spain, the UK is the third export destination for fruit & vegetables, also with a 10 percent to 15 percent share in exports. Ireland depends heavily on the UK market for mushroom exports.

Despite the low self-sufficiency, the UK still exports GBP 0.5bn worth of fruit, vegetables, and flowers to the EU.

Consumer foods (GBP 8.4bn imports)

UK imports of consumer foods amount to GBP 8.4bn, 86 percent of which originates from EU countries. Imports are spread over many countries, with the Netherlands and Germany leading the pack, with imports slightly over GBP 1bn each.

At the same time, the UK is also a significant exporter of consumer foods to the amount of GBP 3.9bn, 70 percent of which is destined for EU countries.

Import tariffs for consumer foods are mostly derived from tariffs on the ingredients (e.g. flour, sugar, milk powder, meat products, etc.) and therefore can be significant. On average, they vary from around 15 percent to 30 percent. Therefore, in the protectionist scenario, imposing import tariffs on consumer foods will have a significant negative impact on trade flows both from and to the UK. Also, in the protectionist scenario, food prices in the UK will increase significantly.

It should be noted that, in general, import tariffs tend to be higher for the more added-value products compared to the raw materials. This also applies to EU import tariffs and, most likely, to future UK import tariffs. This so-called tariff escalation favours domestic processing industries over foreign processing industries.

Frozen potato products (GBP 0.4bn imports)

A specific category in consumer foods is frozen potato products. The UK is only 40 percent self-sufficient for this product category, importing significant volumes from the Netherlands (GBP 219m) and Belgium (GBP 124m).

Beverages (GBP 5.9bn imports)

For beverages, the UK is a net exporter, with exports at GBP 7bn vs. imports of GBP 5.8bn. Exports are spread over a variety of destinations, with EU countries taking up GBP 2.8bn, a 39 percent share in total exports. The imports mostly originate from wine countries such as France and Italy, while the Netherlands ranks third in exports to the UK.

Import tariffs on beverages are relatively low, at around 5 percent. Therefore, the trade diversion effects of imposing import tariffs under the protectionist scenario may be relatively mild. Though prices of the traditional export product, whisky, may decline in the UK, prices of wine, other alcoholic drinks, and soft drinks can be expected to increase, which may result in a shift in consumption patterns.

Tropical products (GBP 3.5bn imports)

Trade in tropical products (chocolate products, coffee, tea, spices, tobacco, etc.) to the UK amounts to GBP 3.5bn. A significant share, 64 percent, is sourced from EU countries. The UK exports these products, too, to the amount of GBP 1.4bn.

Import tariffs on tropical products are usually low (below 5 percent). Therefore, the trade diversion effects in the protectionist scenario will be limited, while the free-trade scenario also won't change very much compared to today's situation. Nevertheless, over time, we can expect suppliers of tropical products—such as, for example, cocoa beans—to increase direct trade with the UK in order to limit the number of border crossings and associated costs. Processors in EU countries are at a disadvantage, because they face border issues (and thus tariffs) twice—when importing the raw material and, afterwards, when shipping to the UK.

Grains & oilseeds (GBP 3.3bn imports)

Oilseeds, meals, and vegetable oils (GBP 1.9bn imports)

For oilseeds, neither the UK nor the EU is self-sufficient, explaining the large share of third countries in UK imports (61 percent).

Import tariffs for oilseeds are low—close to zero—for most products. Therefore, the impact of the Brexit on oilseed, meal, and vegetable oil trade flows will be very limited. However, for oilseeds, meals, and vegetable oils, the involvement of the EU in transhipment—for example, of soybeans via Rotterdam to the UK—may decline, while direct exports to the UK will increase. The Netherlands is the most important EU supplier of oilseeds, meals, and vegetable oils, with a value of GBP 376m, which will come under pressure following an increase in shipping costs from Rotterdam to the UK as a result of border controls and/or import tariffs. UK exports to the EU will be affected to the amount of GBP 305m.

Grains and milling products (GBP 1.2bn imports)

For grains and milling products (including malt, starches, wheat gluten, etc.), the UK has a self-sufficiency of 87 percent. Total imports of grains and milling products amount to GBP 1.2bn, while exports amount to GBP 0.7bn. The EU supplies 64 percent of all imports. The most important EU suppliers to the UK are France and Germany, together supplying 24 percent of all imports. Of all grains and milling product exports, 68 percent goes to the EU.

Import tariffs for grains are slightly above 10 percent, on average. Therefore, the protectionist scenario would have a negative impact on both UK imports and exports. In the free-trade scenario, third countries such as the US, Russia, Ukraine, and Australia are candidates for increasing their share in grain imports, at the cost of EU countries.

Olive oil (GBP 0.2bn imports)

Spain is the most important supplier of olive oil to the UK, followed by Italy. A Brexit will most likely not impact this trade flow much, except for additional border controls that will raise the costs of shipping product to the UK.

Dairy products (GBP 2.4bn imports)

The UK realises a self-sufficiency of around 80 percent for dairy products. Imports amount to GBP 2.4bn, but exports are also significant, at GBP 1.2bn. Imports are sourced almost 100 percent from the EU—mostly from Ireland and France, followed at a distance by Germany, the Netherlands, and Denmark. For Ireland, the UK holds a share of 40 percent in total exports, and therefore this country is very sensitive to changes in trade with the UK.

Import tariffs for dairy products are high. Therefore, the protectionist scenario will reduce trade flows from the EU to a significant degree. At the same time, such a scenario will raise prices in the UK. The free-trade scenario may result in a bigger share for third countries, such as New Zealand, supplying the UK market at the cost of EU countries, which have a higher cost price. However, New Zealand may be more interested in shipping to markets closer to home, which pay more attractive prices.

Sugar and sugar confectionery (GBP 1.1bn imports)

The UK's self-sufficiency for sugar stands at 54 percent. Imports of sugar and sugar confectionery amount to GBP 1.1bn, 70 percent of which is supplied by EU countries—led by Belgium, France, the Netherlands, and Germany—while raw sugar is chiefly imported from Brazil and developing countries. The UK also exports sugar and sugar confectionery to the EU to the amount of GBP 282m.

The protectionist scenario will reduce imports and raise domestic prices significantly, as import tariffs on sugar are high, favouring British sugar beet processors. The free-trade scenario will most likely benefit suppliers from, for example, Brazil, as they can supply the British market with a much lower cost price than EU countries. Such a scenario would benefit raw sugar refiners who depend on third-country raw sugar, especially in times of low world market sugar prices. However, in both scenarios, the sugar refining capacity of British sugar beet processors, as well as the refining capacity of imported raw sugar refiners, will be needed in order to meet domestic demand.

Fertilisers (GBP 0.6bn imports)

The UK is also a net importer of fertilisers, although only 39 percent is sourced from EU countries. Import tariffs for fertiliser are low, at around 5 percent. Therefore, the impact of the Brexit on fertiliser trade will be limited. There will most likely be a slight price increase due to the higher costs of EU imports.

Other factors that will impact trade with the UK

Labour availability to decline, costs to increase

To a significant degree, the British economy depends on migrant workers. On average, 17 percent of total employment is filled by migrant workers: 7 percent from EU countries and 10 percent from non-EU countries. According to the Migration Observatory at the University of Oxford, the food manufacturing industry has the highest share of migrant workers in its workforce, at a level of 41 percent in 2015. Looking in more detail, the primary agricultural sector employs approximately 20,000 migrant workers: 6 percent of the total workforce employed in agriculture. Though this number seems relatively low, the share of migrant labour in the peak season (e.g. harvest) can be expected to be much higher. We also estimate that these migrant workers predominantly come from EU countries.

In food manufacturing, the share of migrant workers varies, with a peak of 64 percent in the processing of meat products, of which 56 percent are of EU origin (*see Table 4*).

Following Brexit, EU migrant workers will face higher administrative burdens when coming to work in the UK. Furthermore, the weakening of the British pound reduces the income migrant workers can earn, expressed in their domestic currencies. As a result, we can expect the UK's food manufacturing industry to face higher labour costs with the lower availability of foreign labour. This will have a negative impact on the competitive position of the British food manufacturing industry.

Table 4: workforce split by UK, EU, and non-EU in 2015

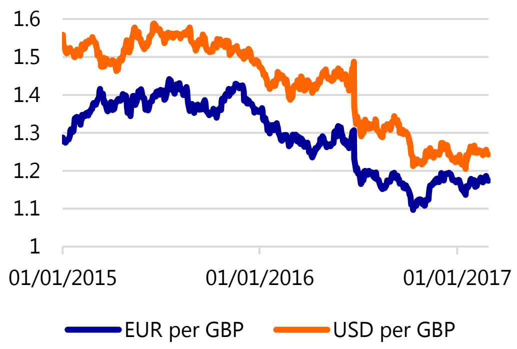
Sector	*UK*	*EU*	*non-EU*	*total*
Processing of meat products	37%	56%	7%	76,505
Processing & preserving of fruit & veg	52%	38%	10%	38,958
Manufacturing of other food products	60%	25%	15%	95,414
Processed fish, crustaceans, & molluscs	68%	28%	5%	12,080
Manufacturing of bakery & farinaceous prods	68%	19%	13%	63,798
Manufacturing of dairy products	69%	22%	7%	23,065
Manufacturing of prepared animal feed	75%	23%	3%	22,223
Manufacturing of grain mill & starch products	84%	9%	7%	12,484
Total	58%	32%	10%	345,353

Source: Office for National Statistics 2017

Exchange rate of the British pound to weaken further

Aside from trade policies, the exchange rate of the British pound vis-à-vis other currencies will be a key determinant of the competitiveness of UK-produced agricultural products vs. imported products. The Brexit vote resulted in an immediate weakening of the British pound by 10 percent vis-à-vis the euro and 11 percent vis-à-vis the US dollar (*see Figure 4*). This means imports became 10 percent more expensive directly after the vote. Over time, this will push prices on the domestic market up to the same degree, as the UK is not self-sufficient for any product category except beverages (whisky). British farmers benefit, because they have become more competitive with regard to imports. Rabobank's outlook for the British pound is a further 5 percent weakening in the coming 12 months (*see Table 5)*. Beyond this period, the relative value of the British pound will depend on how markets assess the impact on the UK economy under the specific terms of Brexit.

Figure 4: Exchange rate of GBP vs. EUR and USD



Source: Bloomberg, Rabobank 2017

Table 5: Exchange rate expectations Rabobank

	GBP/EUR	**GBP/USD**
22 March 2017	1.15	1.25
+3m	1.14	1.22
+6m	1.14	1.22
+12m	1.11	1.22

Source: Rabobank 2017

Future direct income support to UK farmers

British farmers receive some EUR 3.2bn (GBP 2.7bn) direct income support under the EU's common agricultural policy (CAP). After Brexit, this direct income support will disappear, while it is uncertain which measures the British government will take to replace it.

The direct income support makes up 24 percent of the total reward for production factors (land, labour, and capital) applied in agriculture. We come to this percentage as follows: Gross production value of British agriculture amounts to EUR 29.2bn. Subtracting intermediate consumption (i.e. seeds, energy, fertiliser, feed, services, etc.) of EUR 18.9bn leaves a gross value-add of EUR 10.2bn. This amount retrieved from the market is available as a reward for production factors applied in agriculture, i.e. land, labour, and capital. In addition to this, farmers receive the aforementioned EUR 3.2bn in direct income support.

A weakening of the British pound raises the gross value-add to the same degree. That is because domestic prices for agricultural products increase, as those prices are set in international markets and the UK has little influence on them. At the same time, the weakening of the British pound raises the cost price of inputs—such as fertilisers, crop protection chemicals, and seeds—to the same degree. As a result, simply said, a 1 percent weakening of the British pound increases the gross value-add of British agriculture by EUR 100m. The expected 15 percent weakening of the British pound in the period since the vote on Brexit and the end of 2017 translates into a EUR 1.5bn addition to gross value-add, which is about half of total direct income support to British agriculture.

Winners and losers under the various scenarios

With the departure of the UK from the EU internal market, trade between the UK and the EU will become more costly. Even a sort of customs union between the UK and the EU will not be the same as being part of the EU internal market: At the border, the origin of products needs to be verified in order to make sure traders from third countries don't circumvent EU or UK import tariffs. Therefore, we can already identify some losers, irrespective of the scenarios.

First, EU exporters to the UK will face new custom controls when exporting to the British market. We estimate the costs of these controls to be comparable to a 5 percent to 8 percent import tariff. Especially those EU exporters who export finished and/or semi-finished products to the UK based on imported raw materials (e.g. coffee, cocoa, tropical fruits) will be impacted. These exporters will face increased competition from British processors who can source these raw materials directly and, as a result, do not face border issues after processing.

Second, British exporters to the EU will face the same increased costs when exporting to the EU market.

British consumers and food processors will have to pay the bill of the additional costs. So far, the impact of the weakening of the British pound has been relatively muted. Prices have been protected by currency hedges, which are only now unravelling, while long-term retail contracts have suppressed prices and have led to a reluctance of British retailers to increase prices. In the longer run, food inflation can be expected to rise, due to the weakening of the British pound and the deteriorating terms of trade for the UK.

Impact varies by group of products

We can make a distinction between three groups of products. First, fresh products—such as several fruits, vegetables, and flowers—for which the UK has no alternative than to source from EU countries, no matter what the scenario will be. Olive oil also falls into this same category. For these products, the increased costs of trade due to border measures will raise domestic prices, the degree to which depends on the scenario, potentially negatively impacting consumption.

Second, globally traded agri commodities for which the UK is a net importer—such as meat, dairy products, frozen potato products, grains, and sugar. Today, for the most part, the UK imports these products from the EU. In the protectionist scenario, these imports from the EU will decline, while third countries will not be able to fill the gap due to the same trade restrictions. In the free-trade scenario, EU exporters will suddenly face competition from third countries on the British market. How much market share third countries will gain at the cost of EU suppliers will depend on the attractiveness of the British market for these third country suppliers vis-à-vis other destinations.

Third, there is the group of further-processed products, composed of several ingredients. In the EU, this 'assembly' through sourcing from several countries is relatively frictionless. Brexit will impact the trade in raw materials, semi-finished products, and end products, as this trade becomes subject to border measures. Typically, EU import tariffs are structured in such a way that further-processed products receive higher import protection than raw materials. This may also apply to the UK after the Brexit. Therefore, the optimal location for assembling a food product may change from the EU to the UK. Special cases are those F&A value chains that depend on imports from third countries (e.g. cocoa, oilseeds). For these products, the benefit of moving the manufacturing location that supplies the UK market to the UK will probably strengthen, because of an absence of a link with local production in the EU. However, labour availability also has to be taken into account when moving assets to the UK.

Furthermore, this 'assembly' issue also negatively impacts the valorisation of British agricultural products. For example, a chicken carcass depends on the ability to sell various segments in different markets: breast meat in country A, wings in country B, legs in country C, etc. Therefore, valorisation of agricultural produce—such as meats, milk, and grains & oilseeds—in the UK will also become more difficult/costly after the Brexit.

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