FCA Economic Report
Office of Regulatory Policy
Agricultural and Economic Policy Team

July 5, 2016

Summary

On June 23, 2016, the citizens of the UK, by a margin of 52% to 48%, voted to leave the 28-member EU. Major voter issues included immigration and globalization. The exit process is expected to take two years. The surprise Brexit vote sent shockwaves throughout global financial markets, driving down stocks, bond yields and commodity prices and raising the value of the U.S. dollar against most currencies as investors sought safety.

Most analysts expect the UK economy to tip into a recession later this year but not the U.S. or the global economies. U.S. exports to the UK account for only 4 percent of U.S. exports and roughly 0.4 percent of U.S. GDP. Likewise, U.S. exports of agricultural and related products to the UK are relatively small (2% of total). The stronger U.S. dollar, however, will make U.S. products more expensive abroad, resulting in lost sales to competitors, at least in the short term until markets stabilize. The Farm Credit System has significant loan concentrations in commodities with a large trade exposure, including tree nuts, soybeans, and forest products.

Authors: Walt Gardiner and Dennis A. Shields, Senior Economists
(703) 883-4056

BREXIT - Implications of the UK's Decision to Leave the European Union

The citizens of the United Kingdom of Great Britain (England, Scotland and Wales) and Northern Ireland, commonly referred to as the United Kingdom or the UK, took part in a historic referendum on June 23, 2016. The question on the ballot was simply, "Should the United Kingdom remain a member of the European Union or leave the European Union?" Voters decided by a vote of 52 percent to 48 percent to leave the 28 member-state European Union (EU). The referendum turnout was 72 percent, with more than 30 million people voting, the highest turnout in a UK-wide vote since the 1992 general election. Major vote issues included immigration, closed borders, and globalization.

The UK's vote to "exit" the EU, commonly referred to as "Brexit" for British exit, sent shockwaves through global financial markets, due mostly to the surprise result as polls had indicated the majority of UK voters would choose to remain. The economic, financial and policy implications are most significant for the UK, followed by the EU and then those countries with strong financial and trade ties to the UK and the EU.

There will likely be some trade policy changes as a result of the UK leaving the EU and could result in fewer UK trade barriers than the highly protectionist policies of the EU's Common Agricultural Policy that governs support measures for farmers and trade policies with non-EU members (see appendix). Disentangling the UK from the EU's programs and policies will take at least two years because of the adjustment period stipulated in Article 50 of the Lisbon Treaty, which governs the process for a country leaving the EU.

Political Process for Leaving the EU

The political situation in Europe is expected to remain fluid for some time as the UK navigates the separation process. To start the exit process, the UK parliament must pass legislation to invoke Article 50. A two-year deadline is then set to finalize a deal establishing the relationship between the UK and the EU across a wide range of issues, including immigration and trade in goods and services.

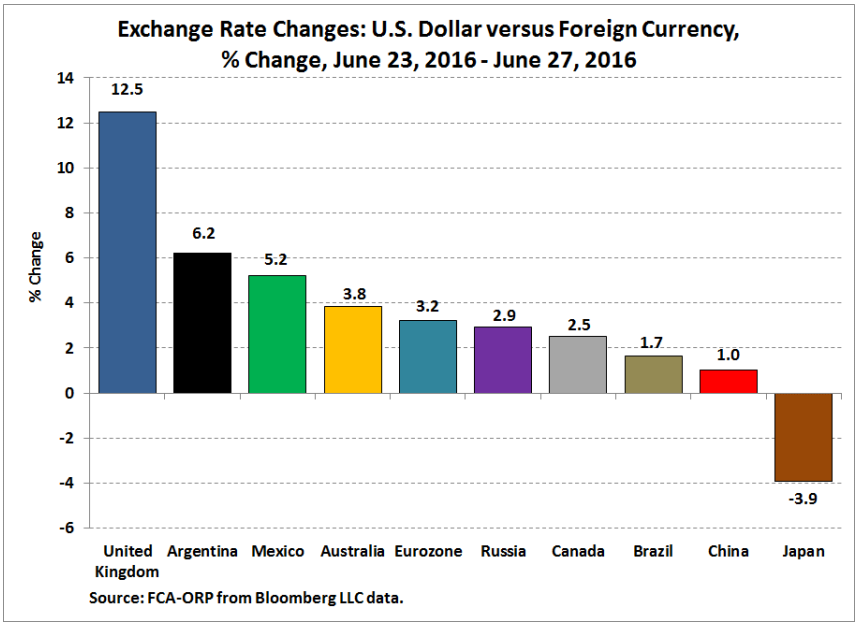
Those who want the UK to remain in the EU may pursue a second vote held after details of the separation package are known, which could take approximately two years or perhaps longer. Some in Scotland are calling for a referendum to leave the UK and join the EU, since a majority of Scots voted to remain in the EU. A majority in Northern Ireland also voted to remain, and some have called for a reunification of Ireland to remain an EU member. More pressing in the short term, though, is leadership. The current Prime Minister, David Cameron, has announced he will resign and leave the separation process to a successor this fall. The presidents of the European Parliament and the European Commission would rather have Britain out as soon as possible.

Many analysts are expecting significant political turmoil going forward, with the UK perhaps the biggest political and economic casualty. Nevertheless, the "anti-establishment' sentiment in the UK has been confirmed by the referendum, and any effort to return to the status quo would likely be a major issue in future elections. More broadly, the events in the UK could embolden nationalists in other EU member countries to try a similar exit strategy. This could create political and financial uncertainties elsewhere in the EU, ultimately causing members of the economic bloc to drift apart. A movement toward less global market integration would have a negative effect on U.S. agricultural prospects because the United States is a net exporter of agricultural products and the sector's economic health is highly dependent on trade, global economic growth, and access to foreign markets.

Market Response to the Surprise Brexit Vote

The outcome of the referendum surprised pollsters and spooked the markets because of the uncertainty of the economic and political implications of one of the EU's largest member states leaving. The UK's vote to exit the EU sent stock markets around the globe and the British pound sterling plummeting, while the U.S. dollar and the Japanese yen soared as investors sought safe havens. The London Stock Exchange's index of top 100 companies (FTSE) fell 5.6 percent in the first two trading days after the vote, with the U.S. stock exchanges following suit: Nasdaq -6.4 percent, S&P -5.3 percent, and the Dow Jones -4.8 percent.

The UK's currency, the British pound sterling, declined 8.8 percent against the U.S. dollar on Friday, June 24th, the day after the referendum, to its lowest level since 1985. On Monday, June 27, the markets continued to react negatively to the UK's decision to leave the EU, taking the pound down further against most currencies, while the U.S. dollar continued to strengthen, reflecting the continued flight to safety. So in the two trading days after the referendum, the U.S. dollar appreciated 12.5 percent against the British pound, and 3.2 percent against the euro, the official currency of the Eurozone, which consists of 19 of the 28 member states of the EU.[1]



The flight to the Japanese yen was even stronger than to the U.S. dollar, with the dollar declining 3.9 percent against the yen from June 23 to June 27. The U.S. dollar was also up against most other trading countries (see chart), which means importers of American goods and service will face higher prices following Brexit and may seek cheaper alternatives, leading to a decline in U.S. exports. The stronger dollar should moderate as currency markets stabilize after the initial shock, unless the UK goes into a recession and slower economic growth takes hold in the rest of Europe and other countries with close trade and investments ties.

[1] Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. The nine countries that do not use the euro include: Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and the United Kingdom).

On June 30th, a week after the Brexit vote, the dollar had come down slightly from some of its highs against the British pound and the Euro: from 0.756 pounds on the 27th to 0.7512 on June 30; and from 0.907 Euros to the dollar on June 27th to 0.900 on June 30th.

Bond prices soared following the Brexit vote on the June 23rd, as investors flocked to the safety of government bonds amid a global stock selloff. This resulted in bond yields posting some of their largest single-day drops in years, particularly at the long-end of the yield curve. As of Monday, June 27, the second trading day after the Brexit, 10-year bond rates responded as follows:

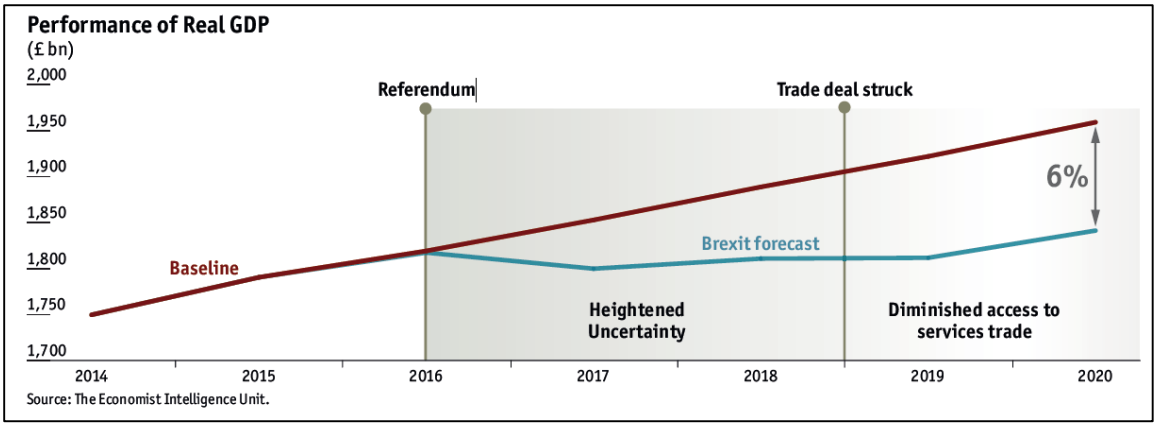
- UK - dropped 44 basis points, or -32.0 percent, to 0.934 percent.
- U.S. - dropped 31 basis points, or -17.6 percent, to 1.44 percent.
- EU - went negative, dropping 21 basis points from 0.093 percent to a -0.116 percent.
- Canada - dropped 21 basis points, or -16.3 percent, to 1.08 percent.
- Japan - went further into negative territory, dropping 5 basis points, or -35.7 percent, to -0.19 percent.

The drop in bond yields reflects growing pessimism about the prospects for long-term growth and inflation around the world. As of June 30, one week after the Brexit vote, the yield on the UK 10-year bond dropped nearly 51 basis points to 0.867 percent; the yield on the U.S. 10-year bond was down nearly 28 basis points to 1.47 percent, but had recovered slightly from its low of 1.44 percent on June 27; and the yield on the EU 10-year bond was down 22.3 basis points to a record low -0.130 percent.

Implications of Brexit on the UK Economy

The Economic Intelligence Unit (EIU) of the Economist Magazine (London), produced a report on the possible effects of Brexit on the UK economy.[2] It concluded that the decision by the UK to leave the EU would have profound consequences for both the UK and the EU. The EIU contends that the country's economy will be plunged into uncertainty. This would be reflected in the first instance by tumultuous financial market volatility, but there would also be a swift impact on the real economy, with households and businesses reining in their spending until the dust settles. Bottom line: The EIU expects all post-Brexit arrangements to be net negative in economic terms, relative to the status quo of continued membership.

More specifically, the EIU projects that real GDP in the UK would be 6 percent below their baseline forecast by 2020 and "the economic pain would be coupled with political instability." However, the analysis indicates that some sectors of the UK economy, such as the automotive sector, might be better placed to withstand the uncertainty that Brexit will bring, but others, such as financial services sector would not.

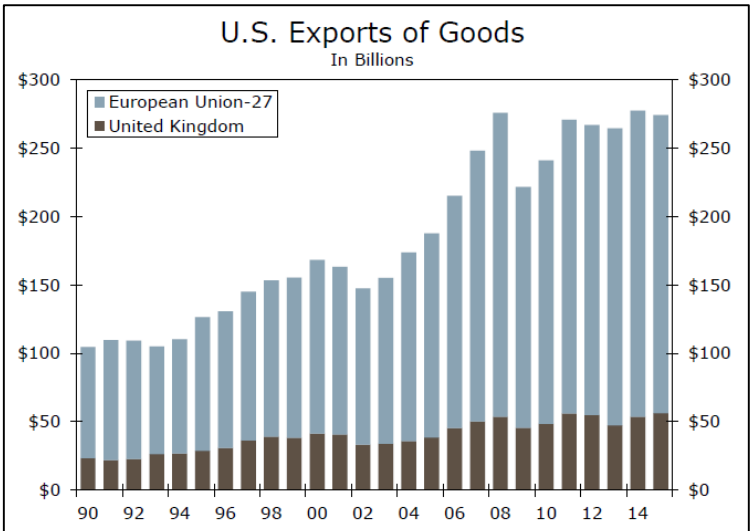


[2] UK economic output of £1.9 trillion, or $2.7 trillion, is about 3.9% of world GDP and a population of 64 million is around 0.9% of the world total.

Impacts of Brexit on the U.S. Economy

The UK's vote to leave the EU has raised concerns among some analysts that market uncertainty could lead to a global recession and negatively affect the U.S. economy. Most analysts believe these fears are somewhat overblown as they relate to the U.S. economy, and that direct effects of Brexit on the U.S. economy should be limited.[3]

U.S. exports to the UK totaled $56 billion in 2015, accounting for only 4 percent of U.S. exports and roughly 0.4 percent of U.S. GDP. This suggests that even in the event of a UK recession, which many analysts expect, the effects should be manageable. The indirect effects of Brexit will likely take longer to surface and be more difficult to avoid. A recession in Britain would slow growth and trade throughout Europe and around the world. The strengthening of the dollar as a result of Brexit could further dampen U.S. exports.



Source: Wells Fargo Securities Economics Group. Brexit and the U.S. Economy, June 30, 2016.

Policy uncertainty has also increased dramatically, which means businesses are likely to be more cautious about expanding their operations, purchasing new equipment or hiring additional workers.

Slower global growth was already weighing on U.S. output before Brexit, as lower net U.S. exports cut into real GDP growth in two out of the past four quarters. U.S. manufacturing has also struggled, with output falling 0.1 percent over the past year. Business fixed investment has been weak, as evidenced by continued declines in core durable goods orders, which means that the U.S. factory sector could face another round of cutbacks. The third estimate of U.S. first quarter 2016 GDP came in at 1.1 percent on June 28, up from the second estimate of 0.8 percent, but still down from the fourth quarter 2015 rate of 1.4 percent.[4]

A surprisingly weak jobs report in May (38,000 jobs versus 162,000 expected) points to a slowdown in hiring and the likely reason the Federal Reserve held rates steady after its June 14-15 meeting. Given the new instability that was added to the market with the UK vote to depart the EU, the Federal Reserve is likely to hold off any increase in interest rates for a while longer. The expectation is just one Federal funds increase in 2016, and possibly two increases in 2017.

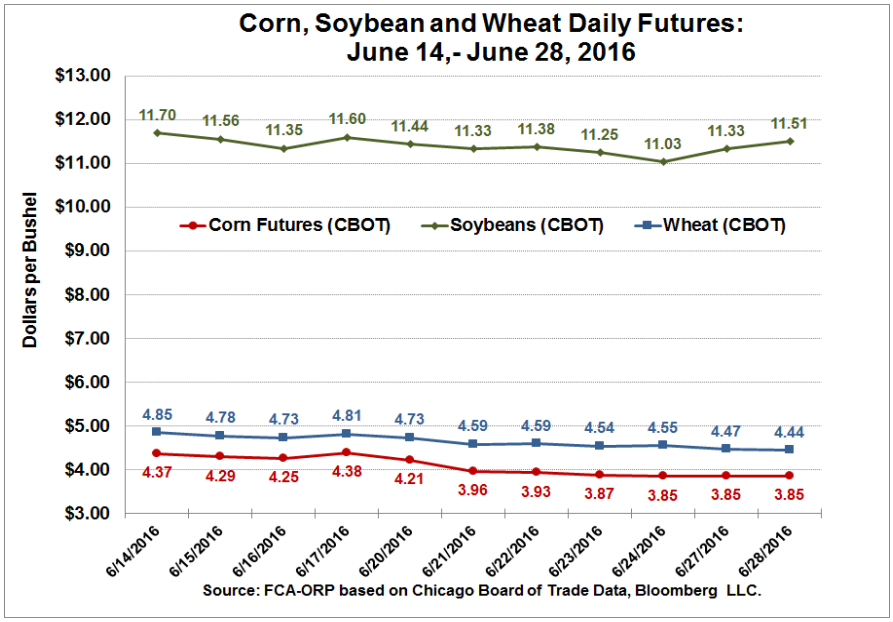
[3] Wells Fargo Securities, Economic Group. Brexit and the U.S. Economy, June 30, 2016.

[4] Consensus Economics projected the U.S. economy to expand at a 1.9 percent annual rate for 2016, the same rate projected for the UK economy, but these projections were released on June 13, or 10 days before the UK vote. Other key country growth projections prior to Brexit were: China 6.6 percent, Canada 1.4 percent, Mexico 2.4 percent, Germany 1.7 percent, France 1.5 percent, Italy 1.1 percent, Japan 0.5 percent and Russia -1.2 percent. Obviously all of these forecasts are undergoing evaluation and are likely to come in lower when Consensus releases it new forecast around mid-July.

Agricultural Commodity Market Impacts[5]

The surging U.S. dollar in response to the Brexit vote, quickly translated into a general commodity sell off, leading to a general decline in commodity futures prices on Friday the 24th, the day after the vote, except gold which rose 4.7 percent. The largest declines were cocoa -5.1 percent, followed by crude oil -4.9 percent, coffee -3.5 percent, feeder cattle -2.1 percent, soybean meal -2.0 percent, and lumber -1.9 percent.

Key crop futures were mixed the day after the vote, with soybeans down 22 cents, or 1.9 percent, to $11.03 per bushel, corn down 2 cents, or 0.5 percent, to $3.85, while wheat was up 1 cent, or 0.2 percent, to $4.55. By Tuesday, June 28, soybeans rebounded 48 cents from Fridays low, or 4.4 percent higher, to $11.51, the highest level since June 17, mostly on slightly reduced soybean crop conditions; corn was steady at $3.85; and wheat was down 11 cents from Friday, or 2.4 percent lower, at $4.44, mostly in reaction to large expected global wheat supplies for 2016.



The short-term focus should be on how markets react in the week following Brexit to see if more of Friday the 24th trade reaction continues. A continued negative reaction by the markets to Brexit would result in the dollar continuing higher, which will keep downward dollar-denominated price pressure on commodities.

Some observations from Informa Economics on agricultural market impacts:

- U.S. grain and livestock markets initially will focus on their individual fundamentals (the crop size, livestock production, demand factors).
- In general, weather events have a way of eclipsing other factors (such as Brexit) in the grain markets. However, until 2016 harvest volumes become known, the uncertainty ahead regarding economic growth and currencies is a drag on the overall markets.
- The impact on global cotton and cotton product trade will be negative to the extent that UK consumers "hunker down" and slow spending on nonessential purchases like fashion apparel during periods of uncertainty.
- If the dollar continues stronger, this will be a negative on U.S. meat export prospects since they are high-valued products, which makes them more price sensitive than bulk commodities like grains and oilseeds.
- Slower global growth would reduce global dairy product demand, imports and prices. If Brexit reduces global GDP growth by 0.5 percent in 2017, global milk equivalent imports would decline by a similar percentage, and prices for EU skimmed milk powder would decline by two to three percent.
- The weaker British pound makes UK dairy product imports more expensive, which reduces UK imports from the EU and leaves more product in the global market for other buyers to purchase.

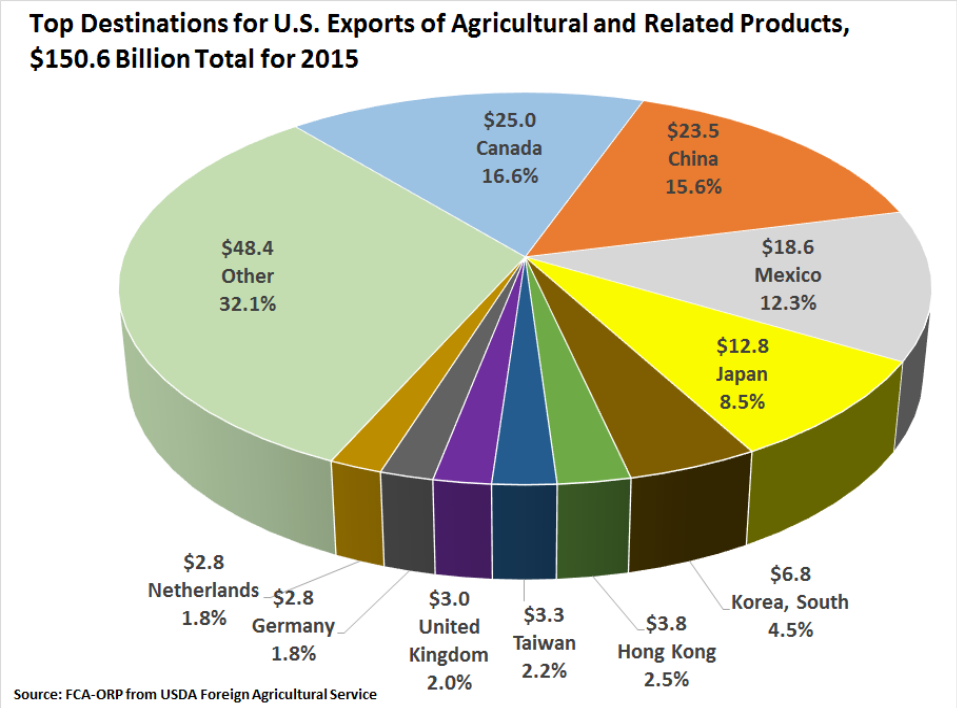
[5] Informa Economics IEG, "Brexit: Facts, Unknowns and Forecasts," June 28, 2016.

- Brexit creates many unknowns on the trade policy front as EU trading partners come to terms with the first country to exit the EU.
- Most observers now predict this could be the death knell for the ongoing U.S.-EU talks for the Transatlantic Trade and Investment Partnership (TTIP).

Implications for U.S. Agricultural Trade

Agriculture experts from across the U.S. don't expect the withdrawal of the UK from the EU to have significant direct impacts on U.S. agricultural exports, at least in the short run, because of the relatively small amount the U.S. exports to the UK.

The UK was ranked 8th among U.S. export destinations for agricultural and related products for 2015 with $3.0 billion in sales, or about 2 percent of the $150.6 billion the U.S. exported to all destinations. Two other EU countries, Germany and the Netherlands, were close behind the UK, taking the 9th and 10th spots, each with around $2.8 billion, or 1.8 percent, of U.S. exports of agricultural and related products. Of the $3.0 billion the U.S. exported to the UK for 2015, the largest categories included:



- Forest Products $840 million (28.2% of the total)
- Wine and Beer $305 million (10.2%)
- Distilled Spirits $231 million (7.7%)
- Tree Nuts $206 million (6.9%)
- Prepared Food $158 million (5.3%)

The UK also imports small amounts of fish products, soybeans, snack foods from the United States.

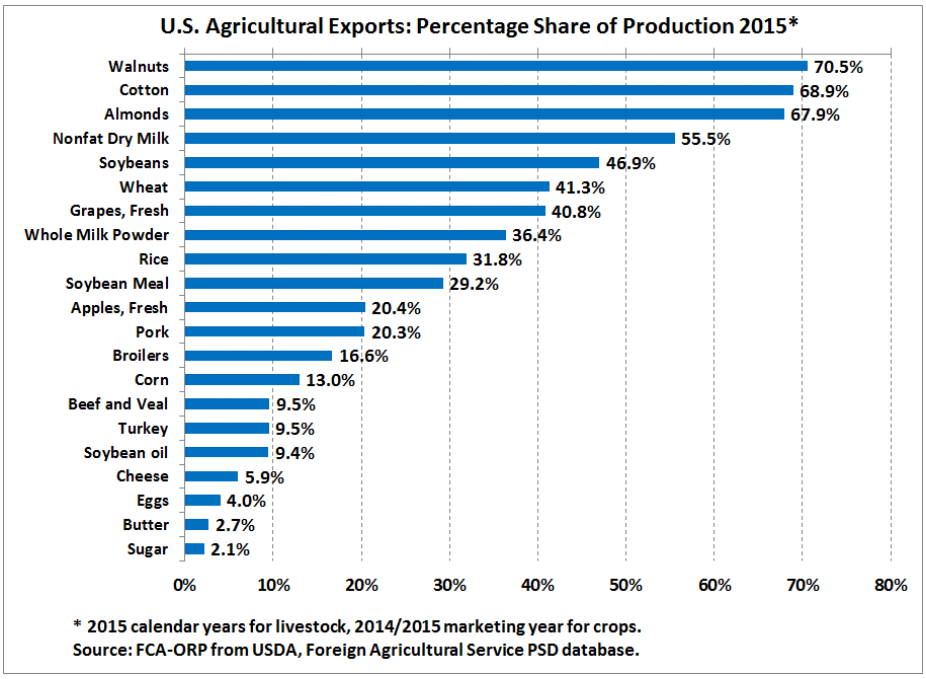
While the UK market for agricultural products may be relatively small, the EU trading bloc of 28 countries is not. The U.S. exported $15.6 billion worth of agricultural and related products to the EU in 2015, which accounted for 10 percent of total sales abroad. Key export items included:

- Tree nuts $2.98 billion (19% of the total)
- Soybeans $1.88 billion (12%)
- Forest products $1.50 billion (9.6%)
- Fish products $1.16 billion (7.4%)
- Distilled spirits $770 million (4.9%)

Other items amounting to around $500 million (or about 3% of the total) in recent years included soybean meal, prepared foods, wine and beer.

If the dollar continues to appreciate relative to the euro, this can hurt U.S. agricultural exports by making U.S. products more expensive for the EU and in turn make the EU's products more attractive to other customers. Also, if the policy uncertainty and slower global growth results in a further strengthening of the dollar, this will hurt U.S. exports globally.

Other agricultural commodities that the U.S. produces and exports in large quantities besides those mentioned for the UK and the EU, will also be negatively impacted by the stronger dollar or a slowdown in economic growth in key importing countries. The chart shows commodity trade exposure based on the percentage of production that was exported in calendar year 2015 for livestock products and marketing year 2014/2015 for crops.



Tree nuts (walnuts and almonds), cotton and nonfat dry milk have a particularly high trade presence, with more than half of the production destined for foreign markets, followed by soybeans, wheat and grapes with between 40 percent and 47 percent of production exported. Meat products with somewhat less but still significant trade exposure include pork (20.3 percent) and broilers (16.6 percent). About 10 percent of U.S. beef and turkey production was exported in 2015.

International Trade Exposure and the Farm Credit System's Loan Portfolio

The Farm Credit System's loan portfolio is subject to international trade risk, which can be measured by trade exposure based on the share of U.S. crop and livestock production that is exported. The following table shows the System's loan concentrations by commodity or commodity group as of December 31, 2015, along with the corresponding commodity's trade exposure: marketing year 2014/2015 for crops and 2015 calendar year for livestock products.

The System's largest loan concentration is in cash grains, which includes oilseeds, accounting for around 17 percent of the portfolio at yearend 2015. Trade exposure for the 2014/2015 marketing year was 47 percent for soybeans, 41 percent for wheat, 32 percent for rice, 29 percent for soybean meal and 13 percent for corn. Cattle loans, the System's second largest loan type at 9.4 percent of the portfolio, had international trade exposure of 9.5 percent. Loans to dairy farms (6.4 percent of the portfolio) are associated with dairy product trade exposures of 55 percent for nonfat dry milk, 36 percent for whole milk powder, 5.9 percent for cheese and 2.7 percent for butter.

Forestry loans by the System totaled $13.6 billion at yearend 2015, accounting for 5.7 percent of the System's loan portfolio. There is no figure to indicate the share of forest production that is exported because of the

difficulty in summing across all the different forms of the forestry products that are produced and exported. However, for 2015, the U.S. exported $8.79 billion in forest products, or nearly 6 percent of the $150.58 billion in agricultural and related products that the U.S. exported to all destinations that year. The UK was the third most important destination for U.S. forest products for 2015 behind Canada and China. The System's loan exposure for tree fruit, nuts and grapes totaled $11.33 billion at yearend 2015, just under 5 percent of the total loan portfolio. Around 70 percent of walnuts and 68 percent of almonds that are produced in the U.S. (mostly in California) are destined for overseas markets, so are very sensitive to international developments. Tree nuts are the most important product by value that the U.S. exports to the EU.

A decline in U.S. exports of commodities with both a large trade and FCS loan exposure as a result of the currency and economic growth impacts of Brexit could result in lower product prices and reduce credit quality later this year and into next year, particularly for associations with large concentrations in export vulnerable commodities described above.

Farm Credit System's Loan Portfolio, Dec. 31, 2015, and Commodity Export/Production Shares, 2015 or 2014/2015*

	Amount	Share	Exports as a Percent of Production
Loan Type	**$ Billions**	**%**	**Commodity and Percent**
Cash grains	41.18	17.3%	Soybeans 46.9%, Wheat 41.3%, Rice 31.8%, Soy Meal 29.2%, Corn 13.0%, Soy Oil 9.4%
Cattle	22.40	9.4%	Beef & Veal 9.5%
Energy and Water/Waste	18.28	7.7%	
Rural Home Loans/Landlords	15.46	6.5%	
Food Products	15.34	6.4%	
Dairy farms	15.14	6.4%	Nonfat Dry Milk 55.5%, Whole Milk Powder 36.4%, Cheese 5.9%, Butter 2.7%
General farms, primarily crop	14.19	6.0%	
Forestry	13.59	5.7%	
Tree fruits, nuts and grapes	11.33	4.8%	Walnuts 70.5%, Almonds 67.9%, Grapes 40.8%, Apples 20.4%
Farm supplies and marketing	10.89	4.6%	
Poultry and eggs	7.67	3.2%	Broilers 16.6%, Turkeys 9.5%, Eggs 4.0%
Field Crops	7.25	3.0%	
General farms, primarily livestock	5.76	2.4%	
Agricultural services and fish	4.99	2.1%	
Hogs	4.98	2.1%	Pork 20.3%
Agricultural export finance	4.72	2.0%	
Communication	4.00	1.7%	
Horticulture	2.79	1.2%	
Cotton	2.18	0.9%	Cotton 68.9%
Biofuels	0.94	0.4%	Ethanol 5.9%
Other livestock	0.37	0.2%	
Other	14.41	6.1%	
Grand Total	237.85	100.0%	

* For commodity export/production shares, livestock, dairy products and eggs are for calendar year 2015. Crops are on a 2014/2015 marketing year basis. The marketing year for corn and soybeans is Sep. 1, 2014 to Aug. 31, 2015; wheat is June 1, 2014 to May 30, 2015; rice and cotton is Aug. 1, 2014 to July 31, 2015.
Source: Loan portfolio data from FCSLoans2 database. Export shares calculated from USDA, Foreign Agricultural Service, Production, Supply and Distribution Data Sets.

Appendix

UK and EU and Agriculture and Policy[6]

The UK produces mainly grains (e.g., wheat, oats, and barley), forage crops, fruits/vegetables, and livestock and dairy products. Although the UK is a net food importer, its agriculture sector is highly dependent on consumers in the rest of the EU, which accounts for about two-thirds of the UK's exports.

The EU is a major producer and trader of agricultural goods. Production is dominated by livestock and dairy products, grains, vegetables, wine, and fruits. Major export commodities include wheat and barley, dairy products, poultry, pork, fruit, vegetables, olive oil, and wine. The EU imports large quantities of animal feed to supplement domestic production.

The EU's Common Agriculture Policy (CAP) generously subsidizes EU producers. Government assistance accounts for a quarter of farm revenue, compared with 7 percent in the United States (2008 figures). Reforms in the mid-2000s led to a greater reliance on direct payments rather than support through high prices. Relatively high external tariffs continue to provide preference to member-country trade while insulating EU farmers from global competition to some extent.

The Brexit referendum has created major uncertainty for future farm support and intra-EU trade in the UK. News reports indicate politicians mostly committing to strong farm support, but costs for supporting agriculture will be weighed against other needs. Moreover, the UK has always been a strong critic of the CAP, so the UK ultimately might provide less support for its farmers than under CAP. Also in question is the extent of market access to the single EU market and migrant labor for UK farms, which are both critical for the UK agricultural sector. It is unclear how much access will be maintained for UK farm exports to the EU market that is currently tariff-free and 500 million consumers in total. Additional costs for border checks and documentation are expected to dampen trade. In the short term, a dramatic weakening of the British pound makes UK products less expensive to buyers in Europe and elsewhere. Conversely, the U.S. dollar has strengthened since the referendum, which reduces U.S. competitiveness in UK and other markets.

Most analysts expect little change for UK's agricultural policy over the next two years while new policy is determined for UK's departure from the EU. The long-term policy and economic uncertainty may encourage some UK food producers and manufacturers to relocate their activities to countries like Ireland or Denmark to maintain preferential access to the EU. Some multinational food companies may be interested in moving to the United States if financial and policy instability grows in Europe. As an input provider, U.S. agriculture producers could benefit from such a development.

[6] This section summarizes information from various sources, including USDA/Economic Research Service, http://www.ers.usda.gov/topics/international-markets-trade/countries-regions/european-union/basic-information.aspx. For figures on intra-EU trade, see http://capreform.eu/agricultural-implications-of-british-eu-withdrawal-for-rest-of-the-eu/