

BREXIT: CURRENT SITUATION AND OUTLOOK

2019

Juan Luis Vega (coord.)

**Documentos Ocasionales
N.º 1905**

BANCO DE ESPAÑA
Eurosistema



BREXIT: CURRENT SITUATION AND OUTLOOK

BREXIT: CURRENT SITUATION AND OUTLOOK

Juan Luis Vega (coord.)

BANCO DE ESPAÑA

The Occasional Paper Series seeks to disseminate work conducted at the Banco de España, in the performance of its functions, that may be of general interest.

The opinions and analyses in the Occasional Paper Series are the responsibility of the authors and, therefore, do not necessarily coincide with those of the Banco de España or the Eurosystem.

The Banco de España disseminates its main reports and most of its publications via the Internet on its website at: <http://www.bde.es>.

Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

© BANCO DE ESPAÑA, Madrid, 2019

ISSN: 1696-2230 (on-line edition)

Abstract

Almost three years on since the Brexit referendum and two since the intense negotiations between the parties began, the failure by the British Parliament to ratify the November 2018 agreement between the UK Government and the other EU governments has led to a situation of great complexity. With only a few days remaining until the deadline for withdrawal, no consensus plan has emerged yet. Without an alternative plan, a no-deal exit is – excepting postponement – the current default option.

This Occasional Paper takes stock of the current situation and outlook for Brexit (i.e. the process of UK withdrawal from the EU) by drawing together a number of studies produced at the Banco de España in connection with the regular monitoring of the process and its potential effects on the Spanish economy. After noting where the current negotiations stand, the paper reviews UK economic developments since the surprise result of the referendum was announced in June 2016. It further lays out the medium-term outlook for the British economy, which hinges crucially on both the type of future trade relationship to be agreed between both areas and the degree of disruption caused by the withdrawal process. As regards Spain, the paper analyses several issues related to its trade and financial exposures to the UK and also provides estimates of the potential effects of Brexit on the Spanish economy under various hypothetical scenarios using the MTBE (i.e. the quarterly macroeconometric model of the Spanish Economy regularly used at the Banco de España for forecasting and policy analysis). Finally, mention is made of the contingency measures adopted, within their respective remits, by the European Commission and the Spanish Government, in the event of an abrupt no-deal exit.

Keywords: Brexit, United Kingdom, Spain.

JEL classification: E69, F15, F47, F59.

Resumen

Tras casi tres años desde que se anunciara la celebración del referéndum sobre la permanencia del Reino Unido en la Unión Europea (UE) y dos de intensas negociaciones entre las partes, la no ratificación del Parlamento británico del acuerdo alcanzado por su Gobierno y por el resto de los socios europeos en noviembre del año pasado ha dado lugar a una situación extraordinariamente compleja, en la que, a escasos días de que se cumpla el plazo para la salida del Reino Unido establecido con la activación del artículo 50, no se vislumbra todavía un plan de consenso. A falta de una alternativa pactada, la salida sin acuerdo en la fecha prevista constituye —salvo prórroga— la actual opción por defecto.

Este documento ocasional hace balance de la situación actual y de las perspectivas que se abren en relación con el proceso de salida del Reino Unido de la UE, y recopila y actualiza algunos trabajos que se han venido realizando, en relación con el seguimiento regular de dicho proceso y con la estimación de sus potenciales efectos en la economía española, en la Dirección General de Economía y Estadística del Banco de España. Tras tomar nota del momento actual del proceso negociador, el documento revisa la evolución de la economía británica desde que se anunciara el inesperado resultado del referéndum en junio de 2016, así como las perspectivas económicas a medio plazo del país, que dependerán ante todo del tipo de relación comercial que se establezca en un futuro entre ambas áreas, así como de la manera más o menos abrupta en que se produzca la salida. En relación con nuestro país, en este documento se analizan diversos aspectos relativos a la exposición comercial y financiera de la economía española al Reino Unido, y se estiman, mediante el modelo trimestral del Banco de España (MTBE), los posibles efectos que el *brexit* podría tener sobre nuestra economía en diversos escenarios hipotéticos. Finalmente, se recuerdan las medidas de contingencia que la Comisión Europea y el Gobierno de España han adoptado, en sus respectivos ámbitos, ante la eventualidad de que la salida del Reino Unido se produjera sin acuerdo y de forma brusca.

Palabras clave: *brexit*, Reino Unido, Unión Europea.

Códigos JEL: E69, F15, F47, F59.

CONTENTS

Abstract 5

Resumen 6

1 Introduction 8

2 Brexit: long and complex negotiations (Teresa Sastre) 10

2.1 Background to the referendum and initial reactions 10

2.2 Procedure for exiting the European Union 11

2.3 Possible alternatives for the future relationship between the United Kingdom and the European Union 12

2.4 The negotiation process and agreements reached 13

3 The United Kingdom economy after the referendum on continuing EU membership (Teresa Sastre) 18

Box 1 Macroeconomic impact of the United Kingdom's withdrawal from the European Union (Lucía Cuadro-Sáez) 23

References 25

4 Spanish trade and financial exposure to the United Kingdom (César Martín Machuca and Elvira Prades) 26

4.1 Aggregate data on trade and financial exposure 26

4.2 The role of value chains 29

4.3 Recent developments in the UK export base 31

Box 2 Characteristics of firms trading with the United Kingdom (César Martín Machuca) 33

Box 3 An exercise estimating the effects on the Spanish economy of the United Kingdom's withdrawal from the European Union (Samuel Hurtado) 35

5 Contingency measures in the financial sector (Paloma Marín and Susana Moreno) 37

1 Introduction

Thirty-three months have now elapsed since the referendum on the United Kingdom's continued membership or not of the European Union (EU). The process then initiated is at a critical point and close to a final outcome. But, just a few days away from the scheduled date for the UK's departure under the Article 50 deadline, the outlines have yet to be clearly and fully drawn. Following two years of intense negotiations, the agreement reached between the UK Government and the rest of the European partners in November 2018 has not been ratified by the UK Parliament. That has led to a situation of great complexity. And there appears to be no clear parliamentary majority for any of the other alternatives tabled as part of the country's political discussions, which include a no-deal withdrawal, a second referendum and a delayed exit. At the time of this paper going to press, the Theresa May-led Government was seeking to negotiate with the other European Governments a political declaration clarifying the aspects of the agreement that have prompted most opposition and that would thus allow parliamentary ratification. However, it should be recalled that, in the absence of any alternative agreement, exit on the scheduled date is – unless there is an extension – the current default option. It is essential here to successfully culminate the efforts of so many months of negotiations and secure the following aims: to preserve financial stability; to minimise the costs that will necessarily arise as the political, social and economic links forged by decades of integration are unpicked; and to lay the foundations for a fruitful future relationship between both parties.

The UK has been a member of the European Economic Community (EEC) since 1973. Its future departure will no doubt give form to a new, less diverse but also more cohesive EU. After a decade of major economic, social and political tensions brought about by the financial crisis of 2008, the fracture in the EU – the first since six countries created the European Coal and Steel Community (ECSC) in 1951 – will finally take place further to the exit of the country that always retained a special status, not sharing the common aspiration of an “ever-closer Union” as formulated in the Treaty of Rome that gave rise in 1957 to the EEC. That vindicates the founding vision whereby the long-term sustainability of the Single Market would, over time, demand greater monetary and economic integration and, ultimately, close political cooperation. EU cohesion has also emerged stronger from the extraordinarily complex negotiations, during which the common positions defended by the European Commission have been upheld.

This paper takes stock of the current situation and outlook for the United Kingdom's withdrawal from the EU. Section 2 summarises the complex negotiations held since the UK Government activated Article 50 in March 2017. It also refers to the current status of Brexit, marked by Parliament's rejection of the agreement reached by the two parties in November last year. Section 3 reviews how the UK economy has fared since the unexpected result was announced in June 2016. It further looks at the country's medium-term economic outlook, which primarily hinges on the future trading relationship to be established between both areas, and on how abrupt the exit should prove. Section 4 is devoted to analysing

the Spanish economy's trade and financial exposure to the United Kingdom. This section also analyses the possible effects Brexit might have on our economy. Finally, section 5 sets out the contingency measures that the European Commission and the Spanish Government, within their respective remits, have adopted regarding the provision of financial services ahead of the possibility that there is an abrupt and no-deal Brexit.

2 Brexit: long and complex negotiations

(The author of this section is Teresa Sastre of the International Economics and Euro Area Department)

2.1 Background to the referendum and initial reactions

The Conservative Party's election win by an absolute majority in May 2015 paved the way for a referendum on the United Kingdom's permanence in the EU. The referendum was an electoral promise formulated with the dual aim of strengthening the party's internal unity, which had been beset by deep-seated disagreements between the Eurosceptics and the more pro-European members, and of countering the growing influence on the Tory electorate of the UKIP (United Kingdom Independence Party) nationalists.

The prospect of holding a people's vote whose outcome was very uncertain mobilised the EU Governments to attend to the concerns that the Prime Minister, David Cameron, had expressed in a letter to the president of the European Council, in order to prevent the United Kingdom's departure. These efforts crystallised in February 2016 when the Council – backed by the Commission and the European Parliament – agreed to strengthen the United Kingdom's special status in the EU through a broad package of measures.¹ These included “clarifications” by the Heads of State and of Government that would have to be taken into consideration as being an instrument for the interpretation of the Treaties; the implementation of new governance mechanisms ensuring that the voice of the Member States that had not adopted the euro would be sufficiently taken into consideration at Eurogroup and Council meetings; and, finally, the adoption of specific legislation on economic governance, competitiveness, sovereignty and social benefits, and free movement. But the agreement was not automatically applicable. Rather, it was subject to a condition precedent. Its provisions would only come into force if the result of the vote was in favour of remaining in the EU. However, the referendum on 23 June that year would be won by those advocating leaving the EU.

The referendum result led to the resignation of David Cameron – who had campaigned in favour of remaining – and to the appointment of Theresa May as Prime Minister in July 2017. The new Government was entrusted with fulfilling the popular mandate with as little disruption as possible. The enormously complex political setting suggested the task would not be straightforward. The polls had been divided, with a relatively thin winning margin. The Brexit option had prevailed by 52% to 48%, with the leave vote very unevenly distributed across the different territories (see Table 1). And this was replicated within the political parties, Parliament and the Government itself. The upshot was a period of unprecedented uncertainty in the recent history of the United Kingdom.

¹ See P. Marín and S. Moreno (2016), “Acuerdo sobre un nuevo régimen para el Reino Unido en la Unión Europea”, *Boletín Económico*, 3/2016, Banco de España.

As a percentage.

	Total	England	Wales	Scotland	Northern Ireland	London
Leave the EU	51.9%	53.4%	52.5%	38.0%	44.2%	40.1%
Remain in the EU	48.1%	46.6%	47.5%	62.0%	55.8%	59.9%
Turnout	72.2%	73.0%	71.7%	67.2%	62.7%	—
Percentage of votes	100.0%	84.8%	4.9%	8.0%	2.4%	—

SOURCE: British press.

2.2 Procedure for exiting the European Union

The procedure for a Member State to withdraw is regulated in Article 50 of the EU Treaty, incorporated by the Lisbon Treaty. This article stipulates basic aspects, such as the obligation to notify the decision to the European Council and the term of two years as from the notification date for effective withdrawal to take place, unless the Member States unanimously agree to prolong the process. Under Article 50, the withdrawal agreement shall be ratified in conformity with the departing State's constitutional tenets. The agreement shall also take into account future relations between this State and the EU, and be approved by a qualified majority in the Council,² further to prior consent by the European Parliament.

However, the practical application of the procedure has not been free from controversy. Both a lack of precedents and diverging legal and political interpretations compounded matters. For example, the EU Court of Justice had to recognise, at the request of a British court, the United Kingdom's power to suspend or eventually revoke its notified decision to withdraw from the EU. On the British side, constitutional debate focused on the respective roles of the Government and of Parliament, both in the notification of the withdrawal decision and in the ratification of the agreement that both bodies had to negotiate with the EU in relation to the withdrawal conditions and to future EU/UK relations. The result of this controversy required some clarification by the British Supreme Court. A substantial role was assigned to Parliament under the Court's ruling. Parliament had to give its acquiescence to the notification by the Government provided for under Article 50 and it will have to ratify, like its European counterpart, the agreement negotiated between both areas' executive branches.

Another aspect subject to debate is the interpretation of the mandate resulting from the referendum. Several MPs – Labour members, Liberal Democrats and Scottish Nationalists – consider it would be necessary to submit the agreement reached by the Government with the EU to a new people's vote. They argue that the 2016 referendum result does not lay down a specific mandate on the terms and conditions of the future UK/EU relationship. The possibility of calling a second referendum has recently been put on the table again. This follows Parliament's rejection of the Prime Minister's deal with the EU, approved by the European Council in November 2018.

² This requires the support of 72% of the Council members, without the departing State, representing 65% of the EU population without the State in question.

The second referendum option has been repeatedly ruled out by the Government, but not by the Labour Party.

2.3 Possible alternatives for the future relationship between the United Kingdom and the European Union

The EU is an area with a high degree of economic integration in which there is free movement of goods, services, capital and persons (the so-called “four freedoms”). The EU Member States are also part of a customs union. In this union's territory there are no physical borders and goods circulate without having to pay tariffs or face customs controls, since all the members' products share the same standards and regulations. Also, there is a common tariff for third countries. Currently, the EU has trade agreements of various types with other countries (see Table 2). There are two options which, as they avoid a customs union in which a common tariff has to be applied and therefore afford the UK authorities independence to enter into trade agreements with third countries, might prove in principle particularly attractive. These are the European Economic Area (EEA) and free trade agreements. In the EEA – the case of Iceland and Norway – there is still full mobility of goods, services and persons; but the UK would lose its current capacity to influence EU regulations, which would be commonly applied, and a physical border between both areas would not be avoided. The EU has signed free trade agreements with countries such as Canada, South Korea and Japan. Under such agreements tariffs are usually eliminated, but compliance with EU product rules and standards is required.

As regards the provision of services, there is full freedom under the EEA model. Under free trade agreements, access to the Single Market for services would be limited to specific cases, in keeping with the terms of the agreement, and financial institutions would not be entitled to provide services in any EU country (financial passport). The resulting situation for financial services provision

TYPES OF RELATIONSHIPS BETWEEN THE EU AND THIRD COUNTRIES

TABLE 2

Type of agreement	Example	Characteristics
European Economic Area (EEA)	Iceland Norway Liechtenstein	Contributions to the EU budget Freedom of movement of goods, services, capital and persons Outside the Customs Union with the EU Very limited influence over regulation
European Free Trade Association (EFTA)	Switzerland	Contributions to the EU budget Trade agreements with individual EU countries and by sector Outside the Customs Union with the EU Very limited influence over regulation No rights of establishment for banks
European Union Customs Union	Turkey	Tariff-free access to Single European Market for most products Adoption of EU external tariffs for trade outside EU No influence over regulation or over trade agreements signed with third countries
Comprehensive Economic and Trade Agreement (CETA)	Canada	Tariff-free access (or with low tariffs) generally Customs controls to check compliance with EU standards and regulations No full access to market for services or automatic right of establishment for banks
World Trade Organization (WTO)		Trade with EU subject to EU common external tariff Tariffs in keeping with most favoured nation principle

SOURCES: OECD and prepared by author.

– an activity of strategic importance for the United Kingdom – would be particularly complex, as this is subject to national regulations. Some European countries permit the provision of certain financial services³ provided that the legislation of third countries that are not EU members is recognised as equivalent and that there are collaboration agreements between the national supervisory authorities. In the case of the United Kingdom, where European legislation and regulations are already applicable, access to providing financial services under these arrangements might be feasible from the onset of the United Kingdom's withdrawal. But the equivalence decision would be discretionary, as regards both it being granted and its possible withdrawal.

A particular case in point is the Swiss model. Switzerland's relationship with the EU is built upon bilateral agreements with each Member State that affect specific non-financial sectors and insurance. The agreements require compliance with EU regulations and some contribution to the European budget. Lastly, in the absence of any agreement, trade relations with the United Kingdom would be subject to World Trade Organization (WTO) rules,⁴ under the “most favoured nation” regime (each WTO member has to apply to any other WTO member the most favourable tariff of those in place in the countries with which it has trade agreements).⁵

In short, if the United Kingdom loses access to the European Single Market, that would unambiguously mean a reduction, at least in the short term, of the British economy's external openness (lower mobility in goods, services, capital and persons). This would be due to several factors: a) higher cost – tariffs and other non-tariff barriers – of trade transactions between Europe and the United Kingdom; b) lesser attractiveness of foreign investment flows between both areas; c) less ease in the provision of cross-border services; d) forgone possibility of providing financial services throughout the EU for firms only present in the United Kingdom (“European financial passport”) and, possibly, also greater difficulties for EU firms wishing to provide services in the United Kingdom; and e) the loss to the United Kingdom of the advantages from the trade agreements signed by the EU with third countries, at least until the United Kingdom should sign new treaties with such countries.

2.4 The negotiation process and agreements reached

In early 2017 Theresa May set out the British Government's view on the withdrawal plans and on the new relationship it sought to reach with the EU.⁶ She further stated her intention of negotiating a transition period to smooth the change to the new regime. The Prime Minister made it clear that the United Kingdom's priorities ahead of negotiations were to set controls on access for immigrants from the EU and that British justice would cease to be under the jurisdiction of the EU Court of Justice. Acknowledging that both goals were incompatible with access to the Single Market, Theresa May renounced such access. Instead she proposed reaching a free trade

³ Such recognition based on regulatory equivalence is not envisaged in activities such as the raising of retail deposits and trade credit and finance.

⁴ The United Kingdom must first apply for WTO entry as an independent member.

⁵ This stems from the principle of non-discrimination, under which WTO members cannot impose more detrimental treatment (higher tariffs) on some nations rather than others. Preferential treatment is only accepted in cases of regional areas of free trade and of customs unions.

⁶ T. May, “[The government's negotiating objectives for exiting the EU: PM speech](#)”, 17 January 2017.

agreement with the EU that would involve a close trading relationship to be negotiated by both parties. These “red lines” implicitly ruled out EEA or Customs Union membership as models for the future relationship between both areas. They confined the range of possible options to: 1) a free trade treaty with the EU that would provide the maximum degree of economic integration possible (the treaty with Canada could act as a reference); 2) participation in the European Free Trade Association (EFTA), with bilateral agreements with EU countries in specific sectors (the case of Switzerland); and 3) the adoption of WTO rules (setting of tariffs applying the “most favoured nation” criterion), if there were finally no agreement with the EU.

Europe’s starting position on negotiations with the United Kingdom took the form of a series of guidelines approved by the European Council in March that year. These stipulated that the new association agreement would not be negotiated until “substantial progress” had been made in the separation agreement. Moreover, the association agreement could only be concluded once the United Kingdom had withdrawn from the EU and was therefore a “third country”. Finally, the Council excluded the possibility of participation in the Single Market based on a sector-by-sector approach.

Negotiations with the EU began on schedule on 19 June 2017, three months after the British Government activated Article 50. A two-stage negotiation calendar was agreed in the first round: the first would deal with aspects of the United Kingdom’s withdrawal from the EU, while the second would address the future framework of relations between both areas. This second phase, moreover, would only begin once “substantial progress” had been made on three matters: a) the rights of EU citizens resident in the United Kingdom and of British citizens resident in the EU; b) the situation of the land border between Northern Ireland and the Republic of Ireland; and c) the United Kingdom’s financial commitments to the EU before withdrawal. Such progress was expected by end-2017, whereafter talks on security and the new trade relationship would begin as from January 2018.

In September, Theresa May tabled the proposal for a transition period that would maintain the current status quo for around two years. She also ruled out EEA membership again. The Prime Minister promised that the United Kingdom would meet its EU membership financial obligations, and members of her Government made it clear the British contribution to the European budget would be maintained until 2020, when the current financial perspectives conclude. Lastly, two possible models for customs arrangements⁷ were proposed for the future trade relationship with the EU. These would enable the British Government’s commitment to the Good Friday Agreement to be observed and, therefore, would avoid a “hard” border on the island of Ireland.

⁷ The alternative models proposed are: a) to simplify and streamline customs controls using technological solutions, in already existing agreements between the United Kingdom and the EU, and in the operating of controls on third countries (known as the maximum facilitation model); and b) a customs association agreement with the EU, enabling the need for customs controls between the EU and United Kingdom to be eliminated. In this connection, it is suggested that the United Kingdom implement all the requirements (tariffs and other levies on products) demanded by the EU on imports from third countries. As the tariff might differ when the import destination were the United Kingdom, this option requires a merchandise source and destination control system.

With some delay, the European Summit of 15 December 2017 opened the way for the second stage of the negotiations. Now the questions of the transition period and the framework for the future relationship between both areas would be addressed, after the Prime Minister and the President of the European Commission arrived at an understanding about the three matters in the discussion on the first stage of the negotiations. The key points of this understanding were as follows:

- The United Kingdom recognised the financial commitments and the European negotiators' demands. The amounts payable would be between €40 billion and €45 billion.
- It was agreed to keep the rights of European and British citizens resident or planning to reside in the future in the United Kingdom and in the EU, respectively, practically intact. The European Commission and an independent British agency were entrusted with monitoring compliance with the agreements on citizens' rights.
- On the Irish border question, the British government undertook to find a "specific solution" within the framework of the new relationship between the United Kingdom and the EU. If no satisfactory agreement were reached, Northern Ireland would maintain full regulatory alignment with the rules of the Single Market and the Customs Union.

In March 2018, both parties announced that the agreement on the transition period requested by the United Kingdom would last 21 months, from March 2019 to December 2020. During that period, the United Kingdom would retain access to the single market and would be obliged to comply with EU rules. It would, however, be excluded from decision-making bodies. The compromise is part of the withdrawal agreement, which should be ratified in full by the EU and the United Kingdom before the exit date on 29 March 2019. Admittedly, substantial progress was made on citizens' rights and the financial bill. But the governance of the withdrawal agreement and the Northern Ireland question remained pending. On this latter matter, the British negotiators accepted the backstop clause proposed by the EU. This means that Northern Ireland would remain in the Single Market if the British Governments' two customs regime proposals were not to prove workable and effective. The EU's position on these proposals is, in fact, that they are not viable.

That same month, Theresa May (in a speech at Mansion House) set out in detail her proposal on regulatory questions. It is geared to maintaining close regulatory alignment with the EU, to attain the greatest possible access to European markets. The most significant proposal was to establish mutual recognition mechanisms for regulatory equivalence based on results, which will be applicable to financial services. May also undertook to maintain high standards on environmental and consumer-protection matters. She further argued that conflict resolution relating to the EU/UK future relationship should be in the hands of an independent body, and she rejected the prospect of this body being the EU Court of Justice, considering it to be partisan

	No Brexit/ extension Art. 50	Customs Union (EU)	Simple Customs Union (Turkey)	Free trade agreement (CETA-like)	No deal (WTO)
Scope and conditions of market access: goods and services (excl. financial)	Free movement of: goods, services, persons and capital	Free movement of goods, GATS for services	Practically free movement of goods, GATS for services	Goods are less affected, but services have limited access	Most favoured nation tariffs and GATS quotas for services
Customs and rules of origin	Single Market and Customs Union	No rules of origin or customs costs	No rules of origin and low customs costs	Rules of origin and customs costs	Rules of origin and customs costs
Other non-tariff barriers	Single Market and Customs Union	Without other non-tariff barriers	Full set of EU regulations and standards checked at border	Some regulatory alignment and recognition of standards	Full set of EU regulations and standards checked at border
Provisions for financial services trade	Financial passport (free movement of capital)	Third-country regime, national legislation	Third-country regime, national legislation	Prudential nature: third-country regime, national legislation	Third-country regime, national legislation
Provisions for movement of persons/workers	Free movement of persons	Perhaps less limited	Limited	Perhaps less limited	No provisions

SOURCE: Prepared by author.

in nature. Subsequently, the White Paper ⁸ (published in July 2017) summarising her overall proposals for the future relationship with the EU (the Chequers Plan) abandoned the idea of mutual recognition mechanisms for regulatory equivalence based on results. Instead, it was proposed resorting to the regulation-recognition mechanisms already in place for third countries, though it is suggested their scope would have to be widened.

Following fresh delays, EU/UK negotiations culminated on 13 November 2018, with an agreement approved by the European Council at its extraordinary meeting on 25 November. The United Kingdom's withdrawal agreement from EU contains the agreements reached up to that point and, moreover, the last-resort solution (the so-called backstop) for the border between the Republic of Ireland and Northern Ireland. To prevent a physical border in Ireland, should no viable agreement have been reached on another solution at the end of the transition period and until the bases for the future relationship are established, there would be a common customs territory between the EU and the United Kingdom (without tariffs, quotas or checks on rules of origin, and with the alignment of the United Kingdom's external tariffs with those of the EU). Northern Ireland, for its part, would have a special status. It would have to apply the EU Customs Code and maintain sufficient regulatory alignment to prevent a physical border (VAT and sanitary rules for veterinary controls, for instance). That will entail the need for controls on goods circulating between Northern Ireland and the rest of the United Kingdom, and the application by the UK of the common customs tariff.

The solution to the Irish problem soon became the most controversial point in political discussions. Some British MPs, especially those from the Ulster nationalist party upholding Theresa May's Government, claim it may give rise, on a permanent basis, to a border in all but

⁸ The future relationship between the United Kingdom and the European Union, Policy Paper, 17 July 2018.

name between Northern Ireland and the rest of the United Kingdom. After several delays in its passage through Parliament, the agreement was rejected on 15 January 2019 by an ample majority (432 votes against and 202 for). That prompted an impasse which has so far not been resolved. It was clear from the vote that the plan agreed on did not have the majority support of Parliament. But it was also patent from the discussions that there does not appear to be an alternative majority for any other option that might be acceptable to the rest of the EU. At the time of this paper going to press, the British government was seeking to negotiate a political declaration with its EU partners that would ease some of the main concerns preventing ratification of the agreement (chiefly on the matter of the backstop). At the same time, the vagaries of parliamentary discussions make the request for an extension to the departure dates more likely. A comparison of the scenarios still possible is set out in Table 3.

3 The United Kingdom economy after the referendum on continuing EU membership

(The author of this section is Teresa Sastre of the International Economics and Euro Area Department)

The unexpected result of the referendum on the United Kingdom's continued membership of the EU was announced in the early hours of the morning of 24 June 2016. The ensuing leave vote gave rise to a period of great uncertainty in the country. In the economic area, the immense majority of the studies conducted prior to the consultation concluded that leaving the EU would have adverse effects on the British economy, both in the short and in the long term. In the days following the consultation, the financial markets, which had not anticipated the result, were prone to bouts of severe turbulence. These prompted a notable depreciation in sterling, an across-the-board increase in risk aversion and a greater preference for more liquid assets and insurance (see Charts 1.1 and 1.2). The political outlook turned particularly unstable owing to the Prime Minister's resignation, leading the governing party to launch a process to elect a new leader. This instability also fed through to the main opposition party, whose leader's management of the referendum campaign was subjected to intense internal questioning.

As business, consumer and investor sentiment indicators rapidly turned down (see Chart 1.3), international organisations and agencies and private analysts alike significantly

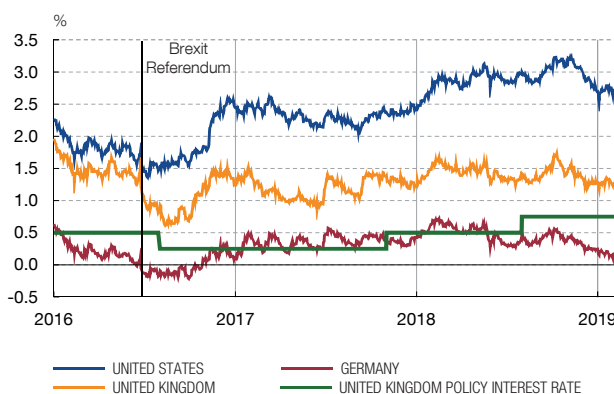
POST-REFERENDUM REACTIONS

CHART 1

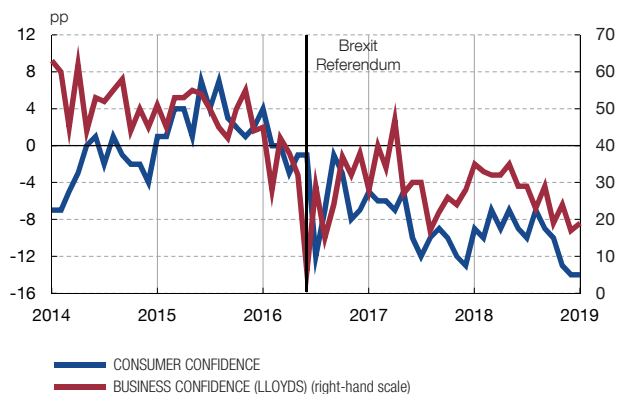
1 EXCHANGE RATE



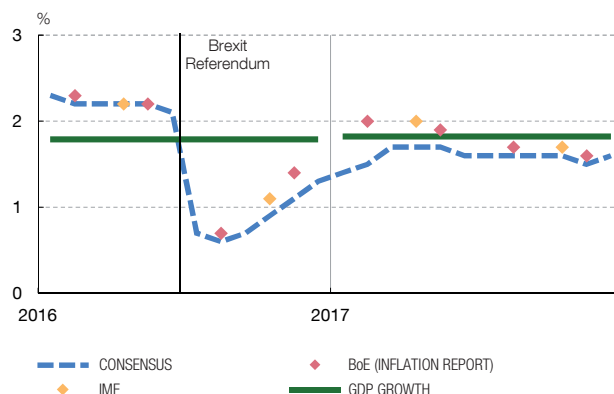
2 10-YEAR BOND YIELDS



3 CONFIDENCE INDICATORS



4 GDP FORECAST (2017)



SOURCES: Iberia Financial Software, Consensus, IMF, Bank of England (Inflation Report), GfK and Lloyds Bank.

revised down their growth outlook for the United Kingdom (see Chart 1.4) and, to a lesser extent, for other, mainly European economies. The modified forecasts for the United Kingdom accentuated the slowing path of economic activity that had begun in 2015, following the post-crisis recovery. The inflation forecast, by contrast, was revised upwards, owing to the foreseeable impact of the depreciation of sterling. The rising trajectory of the pound's depreciation steepened from the historically low levels attained in 2015.

During the second half of 2016 and in 2017, UK economic activity nevertheless performed better than expected. The confidence indicators recouped much of the ground lost as the political situation became clearer and the authorities showed their readiness to act. The Bank of England, which cut interest rates and adopted various macroprudential and liquidity-supporting measures, contributed decisively to easing the initial tensions and prevented the expected tightening of financing conditions from materialising.⁹

On the external front, sterling's depreciation initially enhanced the competitiveness of UK products (see Chart 2.2). And at the same time, the boom in the global economy, and in Europe in particular, provided additional momentum to the demand for these products. There was thus a reversal of the slowdown in goods and services exports in train since 2015, and they in fact increased by around 5% year-on-year in the second half of 2016 and in the first half of 2017 (see Chart 2.1). This helped trim the UK trade deficit and improved the U.K.'s bilateral balances practically across the board with the EU countries, whose surplus has narrowed (see Chart 2.3). In line with the empirical evidence built up from other past experiences, the favourable contribution of external demand to upholding activity was, however, merely transitory and on a limited scale, owing to the combination of two factors: the low price-elasticity of exports and imports,¹⁰ and the only partial feed-through of the depreciation of sterling to export prices, owing to the increase in exporters' margins.¹¹ Hence the boost to exports from the depreciation appears to have petered out in recent quarters, although the slowdown in imports in step with weakening domestic demand has limited their effect on net external demand.

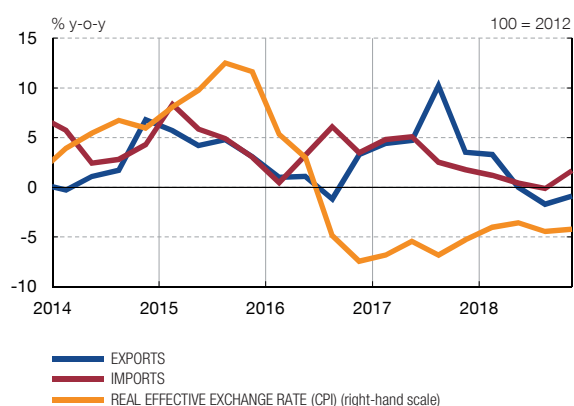
The investment performance in 2016-2017 was also a surprise. This was against a background marked, first, by the growing mistrust aroused by the British Government's rather unclear negotiating strategy following the activation of Article 50 in late March 2017; and further, by the lack of definition of its objectives regarding the future trade relationship between both areas. Gross capital formation slowed only very slightly in this period, driven by two

9 The day after the referendum the Bank of England – which had prepared a contingency plan – and other central banks communicated their readiness to act if liquidity-support measures proved necessary. In early July, the Bank of England's Financial Policy Committee adopted a series of macroprudential measures. These included the reduction in countercyclical capital requirements (from 0.5% to 0% of risk-weighted assets) and, in August, a package of expansionary measures, among which the 25 bp cut in the official monetary policy rate to 0.25%.

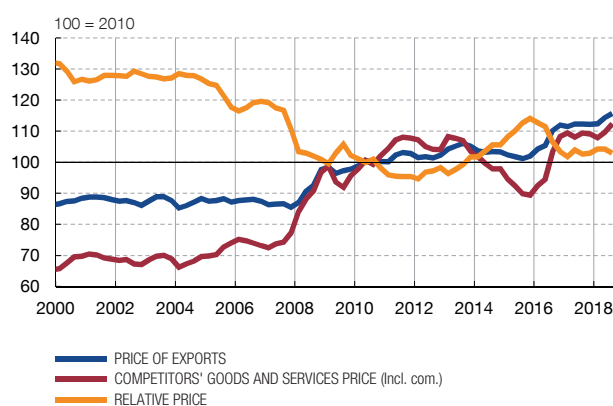
10 See NIESR (2015).

11 Historically, strong depreciations in sterling, such as that at the onset of the financial crisis, have fed through only partly to prices on external markets (and, therefore, to the competitiveness of British products). That means exporters have had to increase their unit margin [see Sastre (2016)]. This partial pass-through may be due to various reasons: for instance, the fact that export prices are set in foreign currency (around 70 % of British exporters do this – see Goldberg and Tille (2009)), or that they tend to align themselves with competitors' prices to a greater extent than with their own unit labour costs, in an attempt to preserve market share [see Buisán et al. (2006)].

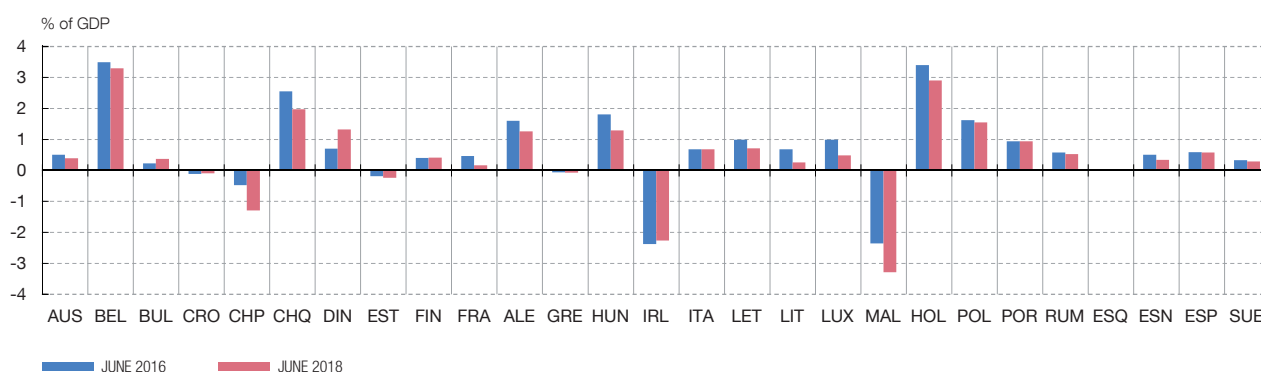
1 EXPORTS AND IMPORTS



2 PRICE OF EXPORTS



3 EU/UK BILATERAL MERCHANDISE TRADE BALANCE (a)



SOURCES: OECD, BIS and Eurostat.

a From the standpoint of the EU countries.

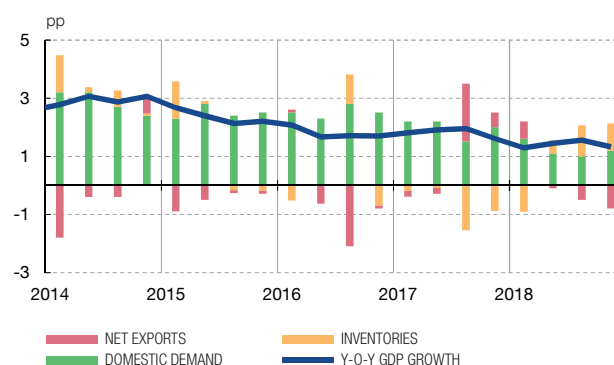
of its components (see Chart 3.2): residential investment, which typically shows a lag equivalent to the time taken to build houses once they are started; and public investment, boosted by the easier fiscal objectives set in the wake of the referendum. Business investment did actually show signs of some sluggishness. But it continued to grow during the period, boosted by the high degree of capacity utilisation¹² and the aforementioned widening of margins in the export sector.

The supporting factors linked to sterling's depreciation, the temporary fiscal policy impulses and the inertia of residential building progressively faded over the course of 2018. They gave way to a weakening in gross fixed capital formation, which was clearly patent in the second half of the year, amid growing doubts over the British Government's negotiating strategy. The increased uncertainty no doubt led domestic investors to postpone their investment plans (in housing in particular) and caused a reduction in foreign direct investment into the United Kingdom.

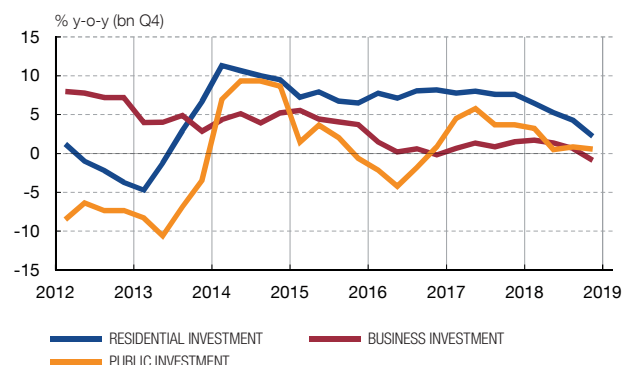
The erosion of real income, prompted by sterling's depreciation and the resulting increase in inflation, which rose to 3% at end-2017 (see Chart 3.4), contributed to easing the

¹² See Sastre (2018).

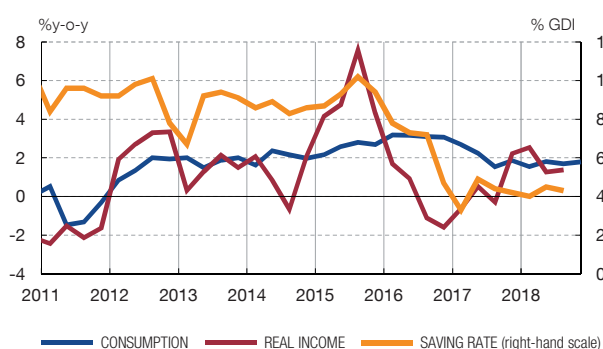
1 CONTRIBUTIONS TO GDP GROWTH



2 INVESTMENT BY SECTOR



3 CONSUMPTION, DISPOSABLE INCOME AND SAVINGS



4 CONSUMER PRICES



SOURCE: Office for National Statistics.

growth in 2017 of private consumption, which had shown some resilience in the second half of the previous year (see Chart 3.3). The slump in the saving rate and the pick-up in real income following the decline in inflation to rates closer to the monetary policy target have contributed to checking the slowdown in private consumption in 2018.

Further factors supporting consumer spending are the low unemployment rate (around 4%) and the behaviour of employment. The growth rate of this latter variable has stabilised at around 1% in recent quarters, following the slowdown observed immediately after the referendum was held (see Chart 4.1). New jobs have mainly been taken up by British citizens, while there has been net job destruction among foreigners in recent quarters (see Chart 4.4). This process has run in parallel with the decline in net immigrant inflows from the EU, especially from Eastern Europe, and some recovery in numbers from outside the EU (see Chart 4.3).

Lower growth in the workforce (owing to lower migratory flows) will exert a negative impact on the UK economy's potential growth. The economy may further be affected by the lower rate of capital accumulation associated with the decline in investment. The higher tariff barriers and less openness to trade which, in all probability, will characterise the future relationship with the EU will tend to weaken the country's productivity growth and productive capacity even further.

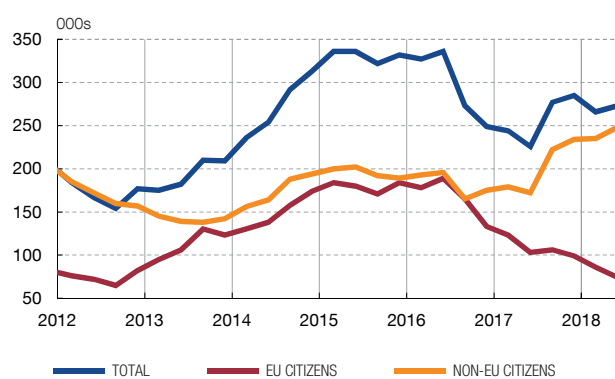
1 UNEMPLOYMENT RATE AND EMPLOYMENT GROWTH



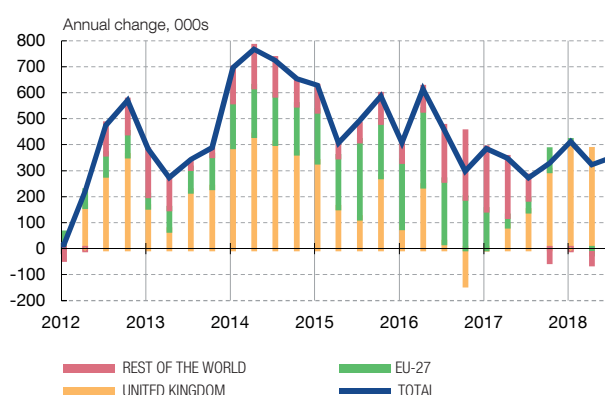
2 WAGE GROWTH



3 NET MIGRATION TO THE UNITED KINGDOM



4 NEW JOB CREATION BY COUNTRY OF ORIGIN



SOURCES: Office for National Statistics, Migration Statistics and Labour Market Report.

Several UK institutions such as the Bank of England and the Office for Budget Responsibility have, along with international agencies, lowered their potential growth estimates in response to Brexit. These now stand around 1.5%, below the growth rate observed in recent years (1.8% in 2016 and in 2017), though they are in line with the increase in GDP in 2018. The medium-term economic outlook hinges above all on the type of UK/EU trade relationship that is established (see Box 1), and on how abruptly the country's departure from the EU takes place.¹³ In any event, the growth path is likely to stand below potential for some years, owing to the necessary adaptation and transition by British productive sectors to the lesser degree of trade openness.¹⁴

¹³ See Bank of England (2018) and UK Government (2018).

¹⁴ See IMF (2018).

(The author of this box is Lucía Cuadro-Sáez of the International Economics and Euro Area Department.)

Since the British Government announced the referendum, many international organisations and private analysts have been estimating the macroeconomic effects that the United Kingdom's withdrawal from the European Union (EU) may have for the country, its European partners and the global economy. Along with methodological differences, the uncertainty over the negotiation process on aspects pivotal to determining these effects explains the wide diversity of analyses and some lack of homogeneity in the results. This box summarises the firmest conclusions that may be drawn from the main estimates available.

The study by the Bank of England (BoE) in late 2018, on the British Parliament's request, analyses several future scenarios. It is a key point of reference here.¹ Importantly, in all the cases described below, the effects are calculated in relation to a baseline scenario as of November 2018, which already includes the adjustment made to the country's economic outlook since the referendum was held. Firstly, the BoE considers the possibility of the parties concerned agreeing to an orderly transition (including a relatively prolonged transition period) towards a new model of trade relations following the separation. In this case, the impact on GDP is estimated to even be positive in the medium term (+1.75%), if a close trading relationship were agreed that did not significantly increase the obstacles to trade between both areas. In the case of a less close trading relationship, the effects would include a slight decline in GDP in the medium term (-0.75%). In both cases, inflation and unemployment would hold at relatively moderate rates (around 2% and 4%, respectively) (see Table 1).

The BoE study also analyses the possibility of the parties not reaching an agreement. In that eventuality, trade between both economies would be subject in future to World Trade Organisation rules, with the subsequent setting of tariffs. This scenario would foreseeably see some of the currently operating productive chains break and some bouts of financial instability cannot be ruled out. And it would ultimately generate effects in the medium and long term that would be manifestly negative both for the United Kingdom and for the EU. Depending on the degree of disruption, declines in GDP might hover between the figure of -4.75% estimated under the least disruptive scenario and -7.75% in a highly disruptive (disorderly) scenario. Given those circumstances, the inflation and unemployment rates might rise to 6.5% and 7.5%, respectively (see Table 1).

Differences in the transmission channels taken into account by the models used to estimate the Brexit effects, and the capacity of these models to consider not only direct but also indirect effects

arising from feedback, are a significant source of divergence in the analyses available. Generally, the results tend to be more pessimistic when, in addition to the impacts operating through the trade channel,² regard is had to the consequences for investment and the implications of lower migratory flows, which exert lasting effects on productivity. For the Brexit no-deal scenario, the BoE's results are in line with those of other recent papers, namely those of the IMF³ and the NIESR (National Institute for Economic and Social Research).⁴ Its results are, however, somewhat less pessimistic than those released by the UK Treasury⁵ (see Table 2).

Some of the papers available extend the analysis to calibrate the impact that Brexit would have on other economies, with a particular emphasis on the EU. The IMF recently estimated that the consequences, in terms of GDP losses, would be rather more moderate for the EU than for the United Kingdom. Under a more optimistic scenario of a future free trade agreement between both areas and then one positing the absence of any such agreement, the IMF estimated these losses at between 0.5% and 1.5%, respectively.⁶ The impact on the global economy would – according to the IMF in 2016 –⁷ be even smaller, between -0.15% and -0.3 %, depending on the harshness of the scenario. Generally, studies that have analysed the effects of Brexit on the EU in a more disaggregated fashion coincide in signalling high cross-country⁸ and cross-regional⁹ heterogeneity. Hence the regions of Ireland would undergo a similar impact to that on the regions of the United Kingdom, while the next regions most affected would be in Germany, the Netherlands, Belgium and France. Spain and Italy would be among the countries least affected (see Charts 1 and 2).

In short, the analyses available unambiguously suggest that UK withdrawal from the EU would have an adverse impact, in terms of income and employment, on both economies. Yet an agreement that were to minimise uncertainty and ensure an orderly transition towards a new model of trade relations with no unnecessary barriers would largely manage to mitigate this impact. This is the hypothesis on which most growth forecasts currently available rest, including those of the BoE, the OECD, the European Commission and the IMF. Conversely, a disorderly no-deal might give rise to significant negative effects both for the United Kingdom – as the BoE's estimate

1 See Bank of England (2018).

2 See Estrada et al. (2019).

3 See Estrada et al. (2019).

4 See NIESR (2018).

5 See UK Government (2018).

6 See IMF (2018).

7 See IMF (2016).

8 See IMF (2018).

9 See for example Chen et al. (2017).

Table 2
ESTIMATES BY OTHER INSTITUTIONS OF THE IMPACT ON THE BRITISH ECONOMY (GDP)

	Date	Deal	No-deal
BoE	November 2018	[+1.75%;-0.75%]	[-4.75%;-7.75%]
IMF	November 2018	[-2.6%;-3.9%]	[-5.2%;-7.8%]
NIESR	December 2018	[-2.8%;-3.9%]	-5.5%
UK Treasury	November 2018	[-1.4%;-4.9%]	-7.7%

Chart 1
IMPACT OF BREXIT. SCENARIO: FREE TRADE AGREEMENT

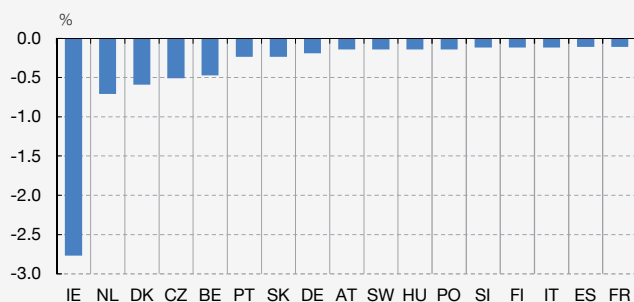
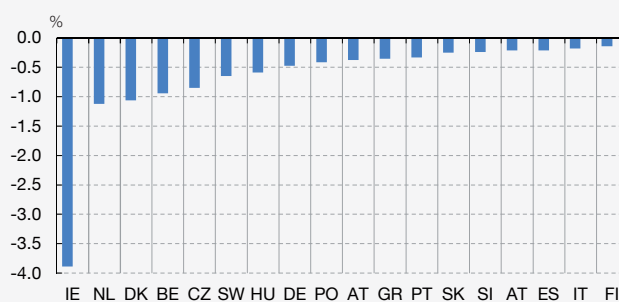


Chart 2
IMPACT OF BREXIT. SCENARIO: WTO RULES



SOURCES: Bank of England, IMF, NIESR and UK Treasury.

a The figures express percentage deviations from the scenario envisaged in the November 2018 inflation report, unless otherwise indicated.

illustrates – and for the EU. That said, there is a high degree of uncertainty and it is difficult to calibrate with any precision the potential transmission channels. In this respect, contingency plans are essential for curtailing possible disruptions with potentially very harmful consequences. Preparations in the financial sector have

been intensive both in the EU and in the United Kingdom. As a result, the European Commission considers that the risks in this sector linked to a no-deal scenario have diminished significantly. On the British side, the BoE believes that the financial system is sufficiently prepared to absorb the impact of a no-deal departure.

References

- BANK OF ENGLAND (2018). *EU withdrawal scenarios and monetary and financial stability. A response to the House of Commons Treasury Committee*, November.
- BUISÁN, A., D. LEARMONTH and M. SEBASTIÁ-BARRIEL (2006). "UK export performance by industry", *Quarterly Bulletin*, Q3, Bank of England, pp. 308-316.
- CHEN *et al.* (2017). "The continental divide? Economic exposure to Brexit in regions and countries on both sides of The Channel", *Papers in Regional Science*.
- ESTRADA *et al.* (2019). *Assessing the Macroeconomic Impact of Brexit through Trade and Migration Channels*, Documentos Ocasionales, Banco de España, forthcoming.
- GOLDBERG, L., and C. TILLE (2009). *Micro, macro and strategic forces in international trade invoicing*, NBER Working Paper, no. 15470.
- IMF (2016). *Macroeconomic implications of the United Kingdom leaving the European Union*, Selected Issues, art. IV, June.
- (2018). *Brexit: Sectoral impact and policies*, UK Art. IV Consultation Selected Issues, November.
- NIESR (2015). *Trade elasticities and the depreciation of sterling*, NiGEM Observations, no. 9, October.
- (2018). *Economic Impact of the Withdrawal Agreement*, December.
- SASTRE, T. (2016). "Ajuste competitivo y recuperación: la experiencia británica tras la depreciación de la libra", *Boletín Económico*, 6/2016, Banco de España.
- (2018). *The impact of Brexit on UK investment*, Documento Interno, Banco de España, September.
- UK Government (2018). *EU Exit: Long-Term Economic Analysis*, November.

4 Spanish trade and financial exposure to the United Kingdom

(The authors of this section are César Martín Machuca and Elvira Prades of the Economic Developments Department.)

This section reviews factors that determine part of the channels of transmission to our economy of the effects of a potential UK withdrawal from the EU. Firstly, the authors analyse the Spanish economy's trade and financial exposure to the UK economy. Such exposure is significant, as in the case of the other main euro area economies. But there are some specific areas, mainly tourism, Spanish firms' direct investment in certain sectors of the UK economy (including most notably finance and telecommunications) and the second-home market, where our economy's sensitivity to developments in the United Kingdom might be comparatively high. Secondly, both economies can be seen to have globalised in recent years, which has raised their participation in the so-called "global value chains". In particular, when we take into account that the end-destination of a portion of our intermediate goods exports is the United Kingdom, the degree of trade exposure increases, although not dramatically. Thirdly, we review recent trends in the UK export base, made up of around 6% of Spanish exporting firms, which have the UK as one of the destinations (in some cases the sole one) for their products. Box 2 analyses the characteristics of these firms in terms of size, diversification and productivity ratios. Finally, Box 3 uses the Banco de España quarterly model (MTBE) to estimate the possible macroeconomic effects of a UK withdrawal from the EU, depending on the type of exit scenario (orderly or disorderly), and whether with a trade agreement or not. Overall, the evidence analysed in this section suggests – in line with the conclusions of other studies by international agencies – that the costs for the Spanish economy of a UK withdrawal from the EU would probably be moderate, but significant in disorderly exit scenarios.

4.1 Aggregate data on trade and financial exposure

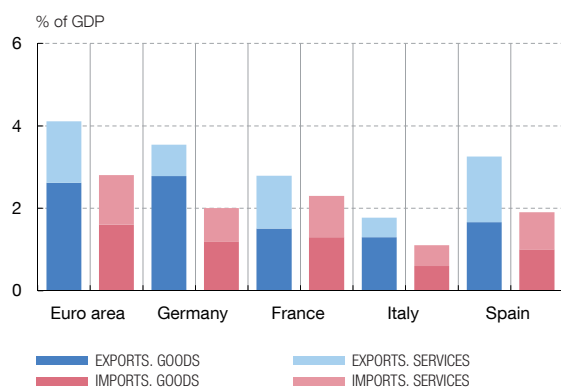
Spain's trade and financial exposure to the United Kingdom provides an initial approach to our economy's vulnerabilities in the face of Brexit. At the aggregate scale, Spain's exposure is relatively similar to that of the euro area. Regarding trade, Spanish goods and services exports targeted on the British economy account for 3.3% of GDP (see Chart 5.1). This percentage is somewhat lower than the average euro area exposure to the United Kingdom, but higher than the respective French and Italian figures. The weight in terms of GDP of imports from the United Kingdom, at approximately 1.9%, is less than that of exports; this percentage is also lower than that of the euro area as a whole (2.8%).

If we consider the breakdown between goods and services, Spanish exposure to the United Kingdom exceeds that of the main euro area partners in services (1.6% of GDP). In the case of tourism, in particular, the United Kingdom is our main issuing market, accounting for 20% of tourist inflows and of total expenditure (see Chart 5.2). While tourist inflows from Britain fell by close to 2% in 2018, their total expenditure increased by around 3%. Notable under exports of non-tourist services are telecommunications and finance, and, to a lesser extent, transport and business services, reflecting Spanish multinationals' rooted presence in the British market.

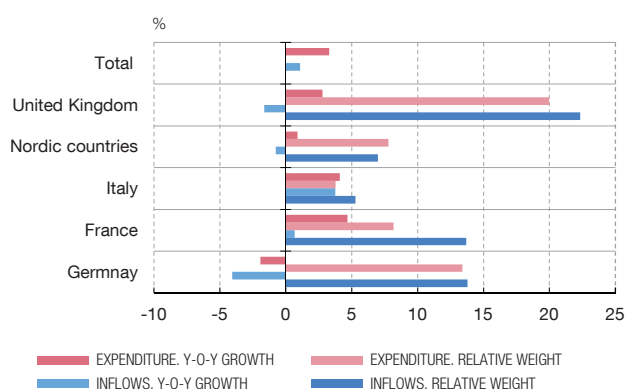
SPAIN'S EXPOSURE TO THE UNITED KINGDOM

CHART 5

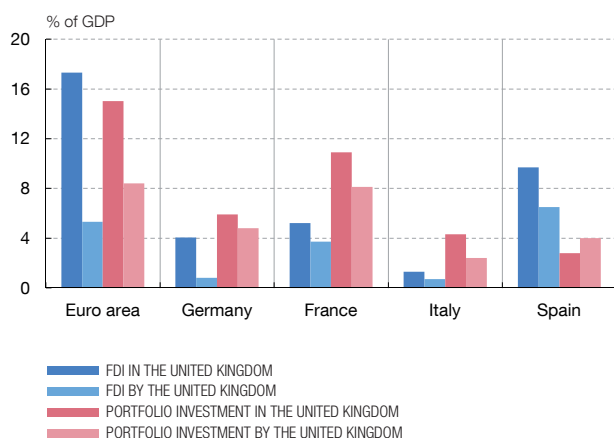
1 EXPORTS OF GOODS AND SERVICES (2017)



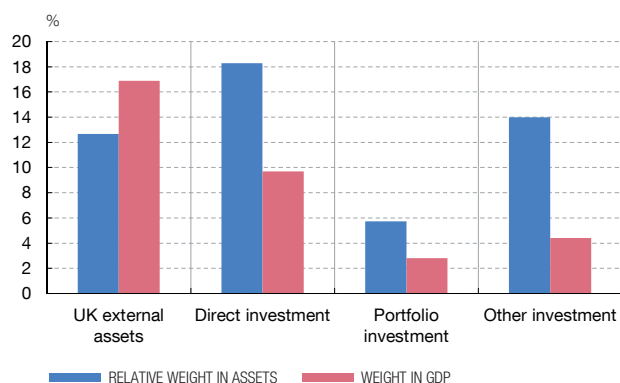
2 INFLOWS AND TOTAL EXPENDITURE OF FOREIGN TOURISTS IN SPAIN BY NATIONALITY (2018)



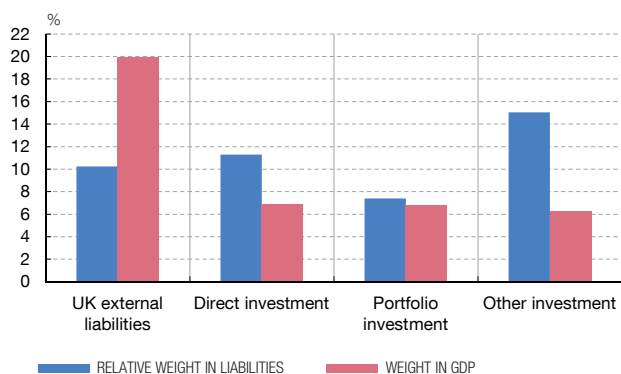
3 DIRECT AND PORTFOLIO INVESTMENT WITH THE UNITED KINGDOM. INTERNATIONAL COMPARISON
Data according to end-investor criterion (IMF)



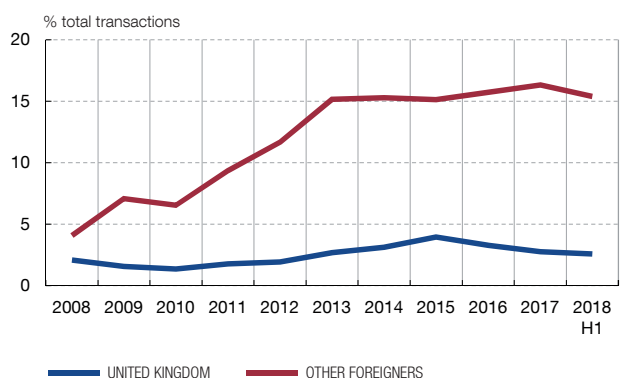
4 SPANISH EXTERNAL ASSETS IN THE UNITED KINGDOM
2018 Q3 IIP data



5 EXTERNAL LIABILITIES
2018 Q3 IIP data



6 HOUSE PURCHASES BY NATIONALITY



SOURCES: Eurostat, IMF, INE and Centro de Información Estadística del Notariado.

In terms of goods exports, the United Kingdom is Spain's fifth trading partner, accounting for close to 7% of the total according to Customs figures. Exports to Britain are concentrated mainly in consumer and intermediate goods. Notable among the sectors with a higher degree of exposure within the consumer goods group are cars and food, beverages and tobacco

(11% and 9% of the total for both these items, respectively). The United Kingdom's exposure is also notable in certain capital goods headings, specifically in transport equipment (13% of the total).

In the financial arena, Spain's exposure to the United Kingdom is, while relevant, as in the case of trade, somewhat lower than that of the euro area average, with the exception of direct investment (see Chart 5.3). On the latest available international investment position (IIP) figures, for September 2018, Spanish external assets and liabilities vis-à-vis the United Kingdom amounted to 17% and 20% of GDP, respectively ¹⁵ (see Charts 5.4 and 5.5). Consequently, Spain maintains a net debtor position with the United Kingdom of 3% of GDP. As to currency, most assets and, above all, liabilities are denominated in euro, with the net position in sterling slightly in the black.

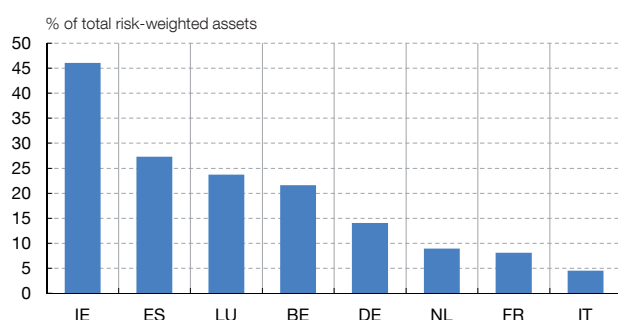
Prominent among Spanish assets in the United Kingdom are direct investments (close to 10% of GDP). Specifically, the UK is the main destination for our foreign direct investment (FDI), followed by the United States and Brazil. Spanish FDI is concentrated in the financial and telecommunications sectors. Other investment (i.e. deposits, loans and repos, essentially) exceeds 4% of GDP, largely reflecting Spanish financial institutions' investments in the UK banking system, in the form of deposits and other debt instruments. Investment in portfolio investment securities are lower and concentrated in fixed-income.

In terms of liabilities, British investment in Spain is less concentrated by type of instrument than in the case of assets. Portfolio investment, preferably in the form of fixed-income, amounts to 4% of GDP, according to the end-investor criterion provided by the IMF's Coordinated Portfolio Investment Survey (CPIS). Other investment is on a relevant scale (6% of GDP, but in this case following the first counterparty criterion), in keeping with London's importance as an international financial centre. Finally, according to figures from the IMF's Coordinated Direct Investment Survey (CDIS), the United Kingdom's presence in the capital of Spanish firms amounts to 7% of GDP, with a notable weight in the tobacco industry and in telecommunications. Financial assets aside, British real estate investment in Spain (see Chart 5.6) is quite significant [close to 3% of total transactions, according to figures from the Centro de Información Estadística del Notariado (CIEN)]. This is especially so in areas where the weight of second homes is significant (in particular the Mediterranean coast and the Canary and Balearic Islands), where this percentage is higher. The latest developments show a gradual decline in the relative significance of British real estate investment, set against a pick-up in total transactions.

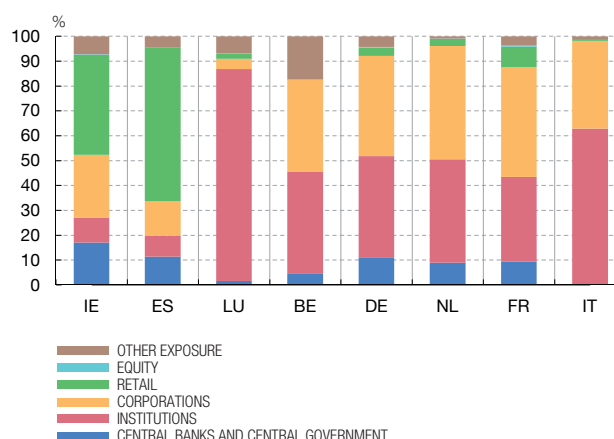
In the particular case of the banking system, Spanish banks' credit exposure to the United Kingdom is only exceeded by that of Irish banks, and is far above that of the banks of countries such as Germany, France and Italy (see Chart 6.1). This high exposure is, moreover, highly concentrated in a small group of banks, whose presence in the British market has mainly been in the form of subsidiaries, which are to all intents and purposes financially independent from the parent. Hence, the prevalence of a subsidiary- as opposed to branch-based model

¹⁵ Here it should be pointed out that some liabilities are recorded on the basis of first known counterparty, which need not coincide with the country of the end holder of the liabilities; this figure may therefore differ from the real one.

1 CREDIT EXPOSURE BY COUNTRY



2 COMPOSITION OF CREDIT EXPOSURE



SOURCES: EBA, results of the EU-wide transparency exercise, 2018 H1.

a Value of post-CCF (credit conversion factor) and CRM (credit risk mitigation) exposure. Excludes securitisations.

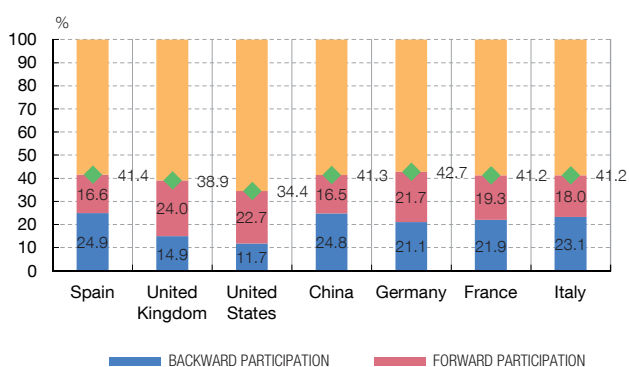
represents an important line of defence in the face of adverse scenarios, as it would help limit the risk of contagion to the parent of potential problems in the British market. Significantly, too, most of Spanish banks' credit exposure in the United Kingdom is concentrated in retail banks (see Chart 6.2). In this respect, the main risk to this portfolio would not be so much from potential financial turbulence at the time of the country's EU exit as from a potential macroeconomic downturn leading to a significant rise in non-performing ratios in the medium term.

4.2 The role of value chains

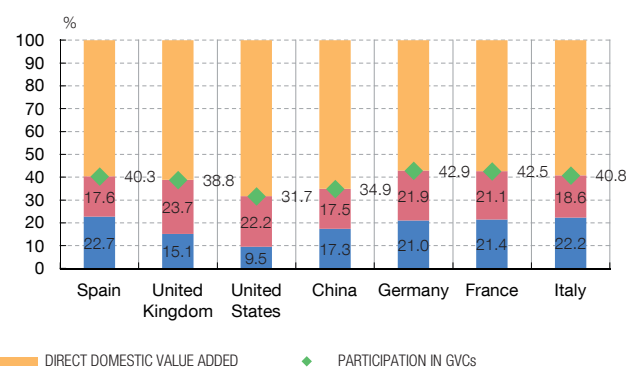
In recent decades global trade has increasingly rested on vertical specialisation and on the international fragmentation of production, as part of the general setting of globalisation of economies. Thus, firms currently distribute the various phases of their productive activity among a group of countries, from the design of the product to the manufacture of parts, and their assembly, marketing and post-sales services, making up what is known as "global value chains".

The predominance of global value chains is an added complication when it comes to evaluating the effects of shocks on international trade in goods and services. This is so because, as a result of their growing extension, trade flows in gross terms have increased substantially above what they have in terms of value added. Hence, traditional calculations of an economy's export structure (which do not discount the value of imported intermediate goods) may differ greatly from those obtained using added values, which are more relevant when evaluating trade transmission channels. This divergence arises firstly as a result of the increased weight of imported inputs in exports (i.e. their import content). Moreover, when calculating bilateral trade exposures, it should be borne in mind that a portion of exports of intermediate goods from country A to country B, following some transformation, will have third countries as their end-destination, and that exports of imports from A to third countries will have country B as their end-destination.

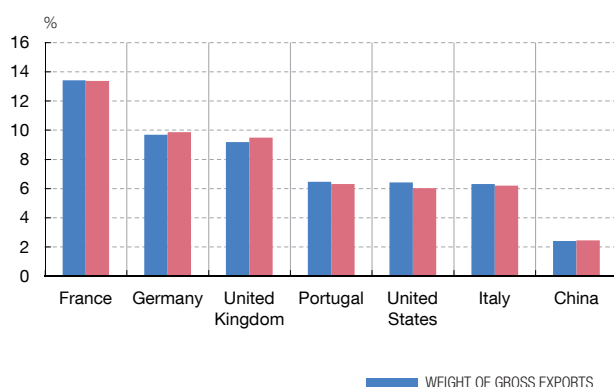
1 BACKWARD AND FORWARD PARTICIPATION OF EXPORTS IN 2017



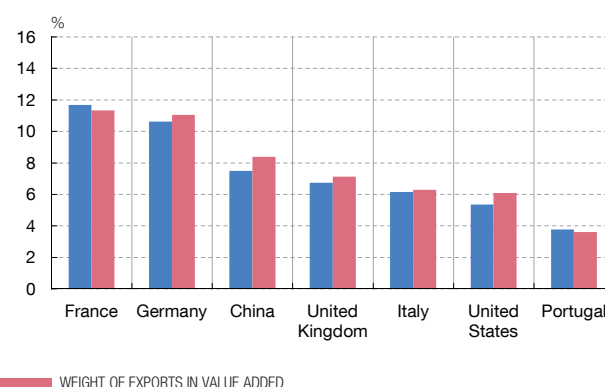
2 BACKWARD AND FORWARD PARTICIPATION OF EXPORTS IN 2015



3 STRUCTURE OF SPANISH IMPORTS BY DESTINATION



4 STRUCTURE OF SPANISH IMPORTS BY ORIGIN



SOURCES: OECD and Trade in Value Added (December 2018).

World **input-output** tables allow gross exports to be broken down into their different value added components, namely domestic (DVA) and foreign (FVA). It is also possible to analyse here the changes in an economy's participation in global value chains as the sum of both components in proportion to the value of their gross exports. On the latest information from the OECD's TiVA (Trade in Value Added) database, released in December 2018, Spanish and UK firms have been part of this vertical specialisation and internationalisation of production, and they have significantly increased their participation in these global chains over the 2000-2015 period. In recent years, Spain's participation has risen from 38.6% in 2005 to 40.3% in 2014, led by the greater weight of the DVA of goods or services which, after being exported, will subsequently be re-exported to a third country. The United Kingdom has increased its participation by 2.5 pp to 38.7% over this same period, with a similar contribution by both components (see Charts 7.1 and 7.2).

As regards bilateral trade, exports to the United Kingdom measured in terms of value added account for around 10% of the total, 0.4 pp up on the calculation in gross terms (see Charts 7.3 and 7.4). The fact that a portion of the value added generated in Spain arrives indirectly in the United Kingdom through trade with third countries serves as a channel for amplifying the impact of lower final demand from this economy as a result of leaving the EU.

As to imports, Spain is the UK's fifth-ranked trading partner. Here, the weight of imports from the United Kingdom in terms of value added is somewhat less than in gross terms. That suggests that the end destination of a portion of imported intermediate goods would be a third country. Wholesale trade, car manufacturing and agriculture are potentially the most vulnerable sectors.

4.3 Recent developments in the UK export base

The United Kingdom is a significant market for Spanish firms. The companies that export goods to the British economy – the export base to the United Kingdom – account for around 6% of the total number of exports and for 14% of regular exporters,¹⁶ according to the latest ICEX (Spanish Institute of Foreign Trade) figures, for November 2018 (see Charts 8.1 and 8.2). Yet the proportion of these firms that have the United Kingdom as their sole international market (and which therefore would, in principle, be those most vulnerable to Brexit) is much lower, at around one-quarter of the regular exporters. With figures for 2017, the latest available for this type of disaggregation, most of these firms are SMEs,¹⁷ over 85% of the number both of total and regular exporters. Despite this, large companies account for around 90% of the volume of exports to that market.¹⁸

On ICEX figures, the export base to the United Kingdom – which had risen by around 14% from 2011 to 2017 – contracted in the first 11 months of 2018, with a cumulative decline of around 1% (see Chart 8.3). The fall was concentrated in non-regular exporters. This was because, despite the uncertainty prompted by Brexit, the number of firms regularly exporting to the United Kingdom continued to rise, albeit less dynamically than in previous years (see Chart 8.5). In terms of value, goods exports to the United Kingdom – which had been increasing most robustly since 2011 – grew by close to 2% from January to November 2018. This followed the 6% decline posted in 2017 as a result of the unfavourable behaviour of large regular exporters' sales set against sterling's depreciation against the euro (see Charts 9.4 and 9.6).

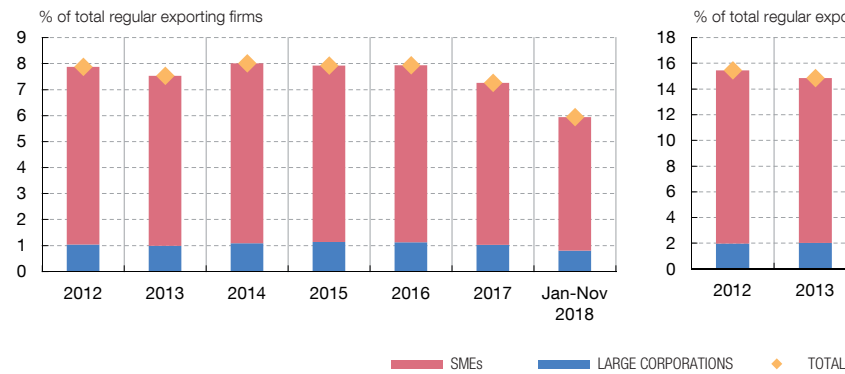
The agrifood and automobile sectors, which account for around 50% of exports, stand out in terms of significance. Indeed, a large portion of the decline in exports to the UK economy in 2017 was in automobile products, which had been rising in a sustained manner until 2016 (see Charts 9.1 and 9.2). The unfavourable performance of exports from this sector continued into 2018, when the number of exporters fell significantly, in contrast to the expansion in prior years. These developments have unfolded against the background of sluggish British demand for cars and of high uncertainty over the consequences of Brexit for the car industry in the United Kingdom. The export base of agrifood products also shrank more sharply in 2018 than the total number.

¹⁶ Firms that export for at least four consecutive years.

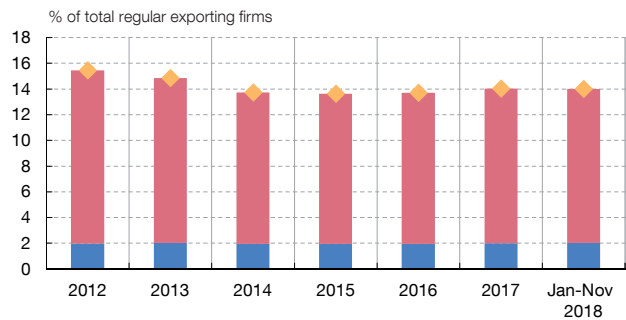
¹⁷ When ICEX data are used in this paper, the authors assimilate firms whose exported value stands below €1 million to the SME category.

¹⁸ This high concentration is a stylised feature of the international empirical evidence and reflects, in part, the lower rate of survival of SMEs engaging in export activity compared with large corporations [see Galán and Martín (2012)].

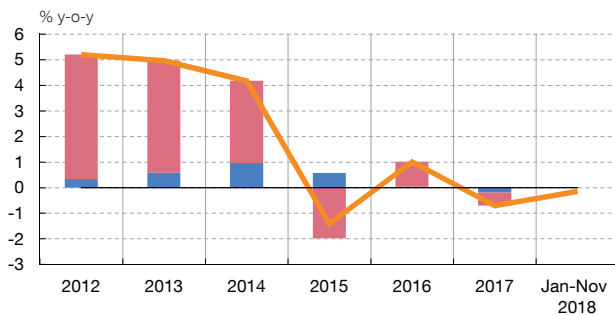
1 FIRMS EXPORTING TO THE UNITED KINGDOM



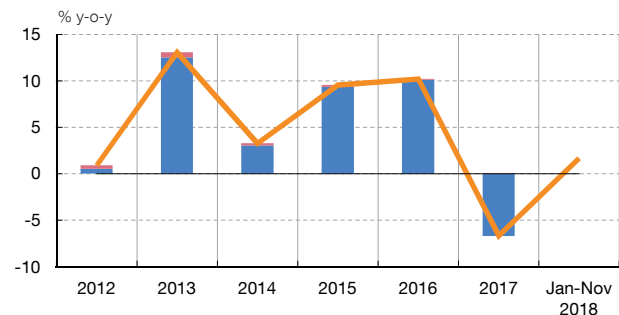
2 FIRMS EXPORTING REGULARLY TO THE UNITED KINGDOM



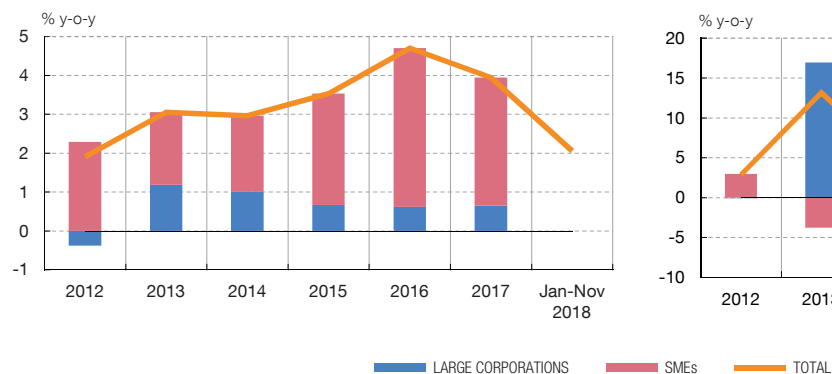
3 NUMBER OF EXPORTING FIRMS



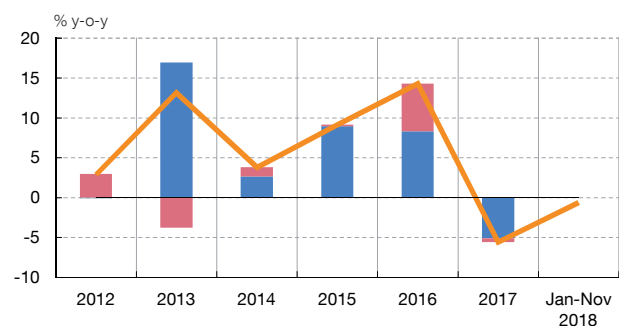
4 EXPORTED VALUE. TOTAL EXPORTING COMPANIES



5 NUMBER OF REGULAR EXPORTING FIRMS



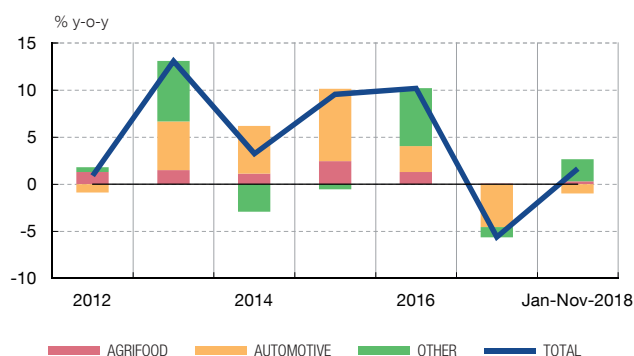
6 EXPORTED VALUE OF REGULAR EXPORTING FIRMS



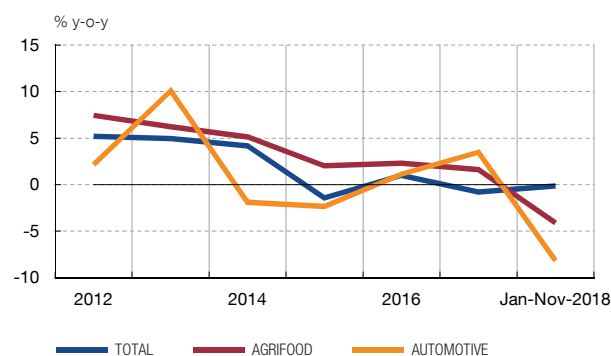
SOURCES: Banco de España and Instituto de Comercio Exterior.

The ICEX information on goods-importing firms is much less detailed. Nominal imports from the United Kingdom have been weak since 2016, when they declined considerably as a result of the strong adjustment in oil prices. The number of importers from the United Kingdom (which in 2017 accounted for around 10% of the total number of importing firms) increased by 65% from 2011 to 2017. This was a far higher rate than that recorded by exporters, and was thanks notably to agrifood firms (see Charts 9.3 and 9.4). Since last year, however, the import base to the British economy has fallen markedly, with a 28% decline in the year-on-year rate in the period from January to November 2018.

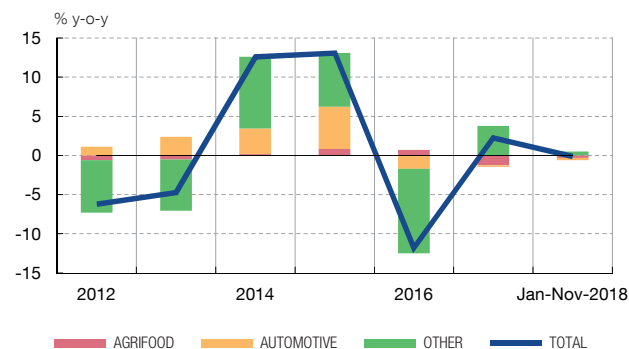
1 EXPORTS BY SECTOR



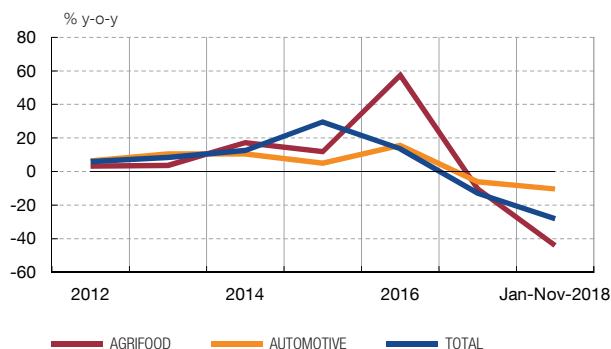
2 NUMBER OF EXPORTING FIRMS BY SECTOR



3 IMPORTS BY SECTOR



4 NUMBER OF IMPORTING FIRMS



SOURCES: Banco de España and Instituto de Comercio Exterior.

CHARACTERISTICS OF FIRMS TRADING WITH THE UNITED KINGDOM

BOX 2

(The author of this box is César Martín Machuca of the Economic Developments Department.)

The vulnerability of the Spanish productive system ahead of Brexit largely depends on the specific characteristics of the firms that trade with the United Kingdom, which may not coincide with those of firms that trade mainly with other economies. Unfortunately, there are few recent data in this respect, and the latest available information is for 2012, when there was a change in the balance of payments information-gathering system. This box describes the main results that year. They are drawn from the use of microdata obtained from the matching of balance of payments information on firms active in foreign trade in goods and from the Central Balance Sheet Data Office.

With the necessary caveats, the information available suggests that firms trading with the United Kingdom are comparatively bigger and more productive (in terms of value added per employee), including those belonging to the agrifood and automobile sectors (see Charts 1 and 2). Such characteristics

might contribute to alleviating, at least in part, the potentially adverse impact of Brexit. Firms trading goods solely with the British economy¹ are smaller in size and show lower productivity than those also present in other countries (see Chart 3). That would be consistent with the empirical evidence that large-scale companies are better placed to tackle the costs associated with being present in different markets.

Moreover, the trade exposure of firms trading with the United Kingdom is, generally, lower than that of those firms trading with the main euro area economies. The UK's relative weight in firms' total exports (imports) was in 2012 lower than that of transactions targeted on France, Germany and Italy (see Chart 4). Also,

¹ According to the microdata on foreign transactions, the sectors in which there might be a higher percentage of firms that only trade with the United Kingdom would, on the exports side, be machinery and other capital goods, agrifood products and the automotive industry; and, on the imports side, machinery and capital goods, the automotive industry and sundry manufactures.

Chart 1
CHARACTERISTICS OF FIRMS TRADING WITH THE UNITED KINGDOM

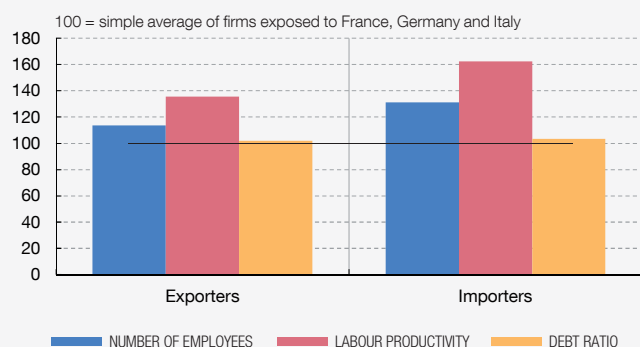


Chart 2
CHARACTERISTICS OF AGRIFOOD AND AUTOMOTIVE EXPORTERS TO THE UNITED KINGDOM

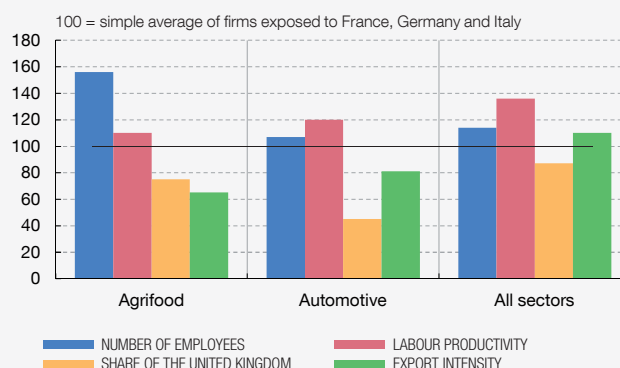


Chart 3
CHARACTERISTICS OF FIRMS EXPORTING SOLELY TO THE UNITED KINGDOM AS OPPOSED TO THOSE EXPOSED TO MORE MARKETS

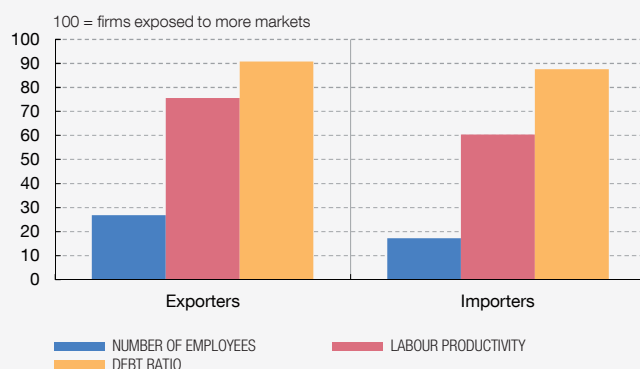


Chart 4
AVERAGE SHARE OF EACH MARKET

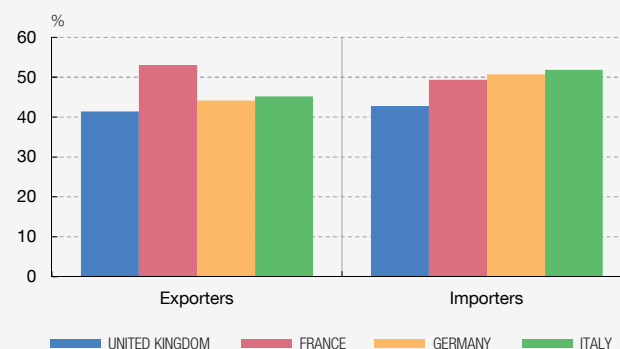


Chart 5
GEOGRAPHICAL DIVERSIFICATION OF SPANISH EXPORTING FIRMS

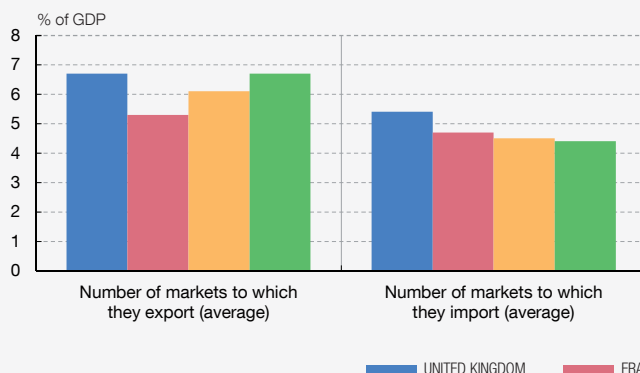
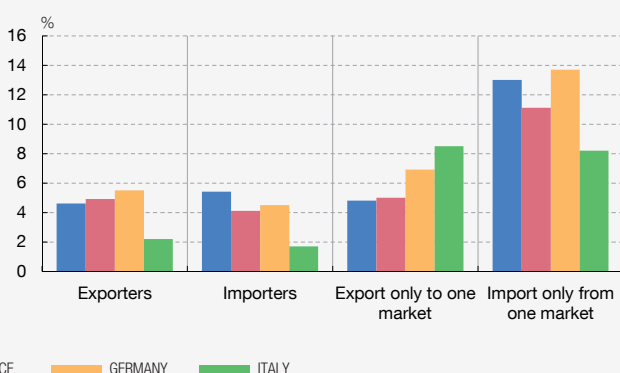


Chart 6
EXPORT/IMPORT INTENSITY (a)



SOURCES: Banco de España Central Balance Sheet Data Office and mercantile registries.

a Defined as the ratio of exports (imports) to turnover.

the geographical diversification (proxied by the number of markets per firm) of firms present in the British economy is higher (see Chart 5). Further, the proportion accounted for by exports to the British economy relative to total turnover was also lower (see Chart 6), while on the imports side the percentage is similar to that of firms that import from France and from Germany. Finally, on

analysing firms that only trade goods with the United Kingdom, the relative weight of exports in turnover is appreciably lower than for the other countries analysed. In the case of imports, this exposure rises notably. That perhaps denotes potential risks in the event of a more restrictive trade deal following Brexit, insofar as these imports relate to products that are difficult or costly to replace.

(The author of this box is Samuel Hurtado of the Economic Developments Department.)

Based on the Banco de España's quarterly model (MTBE),¹ this box estimates the possible effects on the Spanish economy of the United Kingdom's withdrawal from the EU.

The MTBE is a large-scale macroeconometric model regularly used at the Banco de España both for preparing medium-term forecasts of the Spanish economy and for generating various macroeconomic scenarios (simulations of economic policy measures, hypothetical risk scenarios, etc.).

The starting point for this exercise is a set of assumptions about the behaviour of external demand and the exchange rate, in each of the three Brexit scenarios that were envisaged in the Bank of England's 2018 study in response to the Treasury Committee of the House of Commons (see Box 1):

- a) An initial orderly-exit scenario, including the transition period foreseen in the current agreement (still to be ratified), in which the future trade relationship between the United Kingdom and the EU is based on a trade treaty along the lines of that entered into by the EU with Canada since the signing of the Comprehensive Economic and Trade Agreement (CETA) in 2016.
- b) A second, likewise orderly-exit scenario, but in which no specific trade agreement is reached. That means trade relations between the EU and the United Kingdom will be governed by World Trade Organization rules, with the subsequent setting of tariffs and non-tariff barriers.
- c) A third scenario in which, in addition to no agreement being reached, the exit is disorderly, giving rise to disruptions in productive chains and financial instability.

In the three scenarios considered, UK GDP would respectively contract by 0.75%, 4.75% and 7.75% in cumulative terms, according to the Bank of England's estimates. In these calculations, the first scenario would entail a 2% appreciation in sterling from its current level, while the second and third scenario would involve depreciations of 15% and 25%, respectively. Lastly, a shock to growth in the rest of the euro area is added into the simulations, appropriately calibrated for each case. The aim here is to take into account not only the direct repercussions arising from the bilateral trade relationship between Spain and the United Kingdom, but also the indirect impact on our economy via the contractionary effects that Brexit would have on the other euro area economies.²

Table 1 summarises the results of the exercise. Brexit with a trade deal would reduce the level of Spanish GDP by only 0.02 pp

after five years. This is a very small effect because the appreciation of sterling would partly mitigate the effects of the reduction in British demand, in real terms. A no-deal but orderly Brexit would reduce the level of Spanish GDP by 0.5 pp, also in five years, while a disorderly no-deal Brexit would subtract around 0.8 pp.

According to the simulations, in the worst of the cases considered annual average GDP growth would decline by between 0.1 pp and 0.2 pp. As Chart 1 shows, in no-deal Brexit scenarios approximately 70% of the total effect on our GDP would relate to the direct consequences that Brexit would have on bilateral trade with the United Kingdom. The remainder would be due to the effect on the rest of our EU trading partners. Finally, it is worth noting that cases in which a trade agreement is not reached give rise not only to bigger but also swifter declines in activity. Thus, in the third year somewhat more than 80% of the total effect would have ensued, compared with approximately 60% if the withdrawal were accompanied by a trade agreement between both areas.

In terms of the GDP components, the greatest effect would – as is to be expected – be in exports, with a cumulative impact that might be around -2.6 pp. Imports would also fall, since the relatively lower price of imported goods owing to the euro's appreciation against sterling would be more than offset by the impact of the fall in demand. Likewise, in the case of inflation, and despite the appreciation of the euro (and the imposition of tariffs, in cases where there is no trade agreement) making imports dearer, disinflationary effects on account of the reduction in demand would ultimately prevail at the aggregate level. In terms of the various national demand items, the effect on investment might be substantial, whereas it would be more moderate in the case of consumption. The reduction in the level of employment would be similar to that seen in GDP, with cumulative losses of up to 0.8 pp.

The results of this exercise should be viewed with caution, for several reasons. Firstly, the assumptions of the simulations rest crucially on the effects estimated for the United Kingdom itself. The Bank of England's estimates were used in this respect; but regard should be had to the high degree of uncertainty surrounding the calibration of certain basic elements of the exercise, such as the reaction of the exchange rate of sterling in the three scenarios considered. Moreover, the model used in the simulations – in which the demand channels are predominant, especially in the short term – has certain shortcomings that may be particularly important in the specific context analysed. Thus, for example, the financial and confidence channels – which could potentially amplify the effects – are not developed with

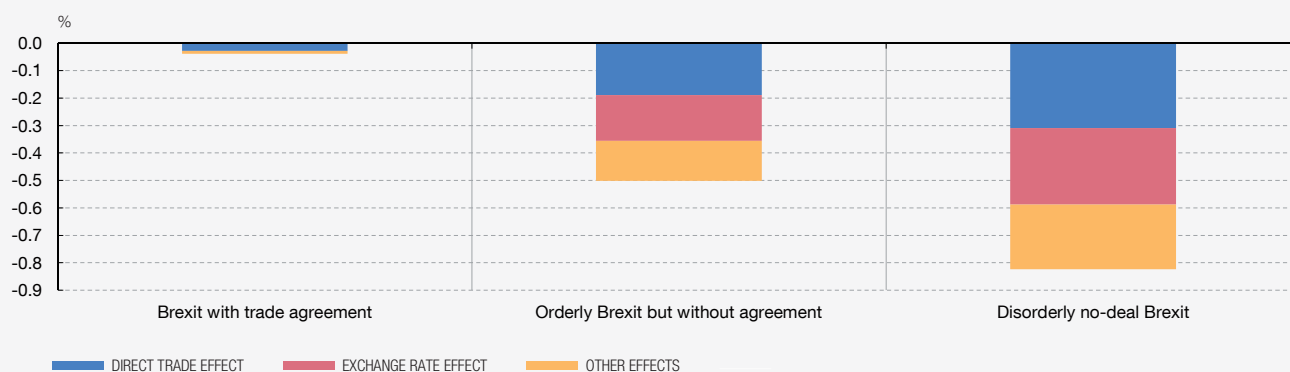
¹ See A. Arencibia, S. Hurtado, M. de Luis and E. Ortega (2017), *New Version of the Quarterly Model of Banco de España (MTBE)*, Documento Ocasional, no. 1709, Banco de España.

² However, the exercise is not extensive to non-euro area countries, for which no shock is imposed.

Table 1
EFFECTS OF BREXIT ACCORDING TO THE MTBE. CUMULATIVE IMPACT AFTER FIVE YEARS

Percentage points of each component	Brexit with trade agreement	Orderly Brexit but without agreement	Disorderly no-deal Brexit
GDP	-0.02	-0.50	-0.82
Consumption	-0.01	-0.24	-0.40
Investment	-0.04	-0.70	-1.15
Exports	-0.09	-1.62	-2.65
Imports	-0.08	-1.09	-1.78
Employment	-0.02	-0.47	-0.77
Prices	-0.01	-0.29	-0.47

Chart 1
BREAKDOWN OF THE CUMULATIVE EFFECT ON GDP AFTER FIVE YEARS



SOURCE: Quarterly model of the Banco de España (MTBE).

sufficient detail. As regards potential mitigating factors, the simulations do not take into account the likely compensatory action of monetary, fiscal and macroprudential policies, which the model considers exogenous. Nor do they include the contingency measures that governments have adopted to lessen the costs of highly adverse no-deal scenarios. Finally, the model also obviates some key considerations when assessing the longer-term effects, such as the consequences of less trade openness on productivity and the potential growth of the United Kingdom and the EU itself. That said, the effects reported in Table 1 are somewhat higher than those calculated in 2018 by the IMF³

(see Box 1), mainly because – following the latest Bank of England estimates – the exercise presented here includes more negative assumptions about the behaviour of the British economy.

On the whole, the results suggest that the costs for the Spanish economy of a UK withdrawal from the EU might be significant but not disproportionate, and will largely depend on the scenario that finally materialises.

³ See *Euro Area Policies: Selected Issues*, IMF, July 2018.

5 Contingency measures in the financial sector

(The authors of this section are Paloma Marín and Susana Moreno of the International and European Relations Department.)

On exiting the EU, the United Kingdom will become a third country for the purposes of the rest of the area's countries. As a result, all EU members will have had to have adopted by then the necessary preparatory measures to adapt to the new situation. And regard must be had to any eventuality, including that of a no-deal exit, which would preclude any transition period allowing for a gradual adaptation. What is involved is a shared responsibility, incumbent upon all public authorities – national and EU alike – and also on economic operators and other private agents. However, the need to adopt public contingency measures has become more evident in recent months following recognition that private initiatives might not suffice in an abrupt no-deal Brexit scenario.

Within the EU, the European Commission has adopted a limited number of contingency measures to alleviate significant shocks in specific and strictly defined areas, where public action in Europe is deemed necessary.¹⁹ The Commission is also working with European agencies and the Member States to coordinate the measures ultimately adopted, and to ensure that contingency preparations are consistent across the EU and in keeping with a series of broad principles set out by the Commission itself. In particular, the contingency measures should not replicate the benefits of EU membership or the conditions provided for in the withdrawal agreement, they should be temporary in nature and they should not remedy delays that could have been avoided by preparedness measures and timely action by the relevant stakeholders.

In financial services, the European Commission has recently indicated that the risks linked to a no-deal scenario have diminished significantly thanks to the relocation of activities from the United Kingdom and to the creation of capabilities in other EU Member States. The Commission has thus deemed it necessary to adopt contingency measures solely to address risks to financial stability relating mainly to the derivatives markets.²⁰ It therefore leaves the Member States responsible for adopting measures in other financial sector areas, given the lesser scope of the adverse repercussions for the EU as a whole. Moreover, the European agencies (ESMA, EBA, EIOPA and SRB) and those of the United Kingdom are in the process of drawing up various memoranda of understanding to ensure the effectiveness of the contingency measures.

The European Central Bank (ECB) and the National Competent Authorities (NCAs) have, within the framework of the Single Supervisory Mechanism (SSM), been actively monitoring the

¹⁹ Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank of 13 November 2018: "Preparing for the withdrawal of the United Kingdom from the European Union on 30 March 2019: a contingency action plan" [COM (2018) 880 final].

²⁰ Specifically, the Commission has adopted decisions on temporary equivalence in relation to central counterparties (CCPs) and central securities depositories (CSDs). It has also drawn up two delegated regulations to facilitate the novation of specific derivatives contracts traded on over-the-counter markets. Adopting these decisions is necessary so that ESMA (the European Securities and Markets Authority) may ultimately recognise UK CCPs and CSDs as infrastructures of a third country. To this same end, on 4 February 2019 ESMA agreed a Memorandum of Understanding (MoU) with the Bank of England, setting the scope of cooperation and the information-sharing agreement.

preparations and plans for the relocation of entities. They have also formulated supervisory policies specifically related to Brexit, aimed largely at preventing the creation of “empty shells” in the EU of groups whose governance and risk management structures remain in the United Kingdom.

In Spain, the General Secretariat of the Treasury and International Financing, in collaboration with the Banco de España, the CNMV (National Securities Market Commission) and the DGSFP (Directorate General of Insurance and Pension Funds), has assessed one-off, time-limited measures aimed specifically at ensuring no disruption around 29 March 2019 regarding those aspects not covered by the European Commission's actions. As regards the provision of financial services, the contingency measures approved by the Government,^{21 22} are aimed at ensuring the continuity of contracts entered into by British institutions prior to the United Kingdom's effective EU exit date. But once departure has taken place, financial institutions must obtain fresh authorisation to enter into new contracts or renew pre-existing ones and to add changes entailing the provision of new services in Spain or that affect stakeholders' essential obligations, as they must in those cases where activities linked to the management of the contracts require authorisation. The authorisation or registration initially granted by the competent British authorities will provisionally remain in force for a period of nine months. That will allow institutions either to transfer the contracts or terminate them in an orderly fashion, or to request the related authorisation in Spain.

It is worth stressing that the measures adopted by the public authorities should not replace action by British financial institutions and by domestic institutions exposed to the United Kingdom. It is for them to assume the main responsibility of adopting the preparatory measures needed. And it is for them to assess the implications of a no-deal UK exit for their business, identifying risks and their potential impact, along with the changes in their organisational structure, the agreements affected and the pertinent authorisations. This likewise affects data exchange, access to market infrastructures and wholesale funding, as it does compliance with recovery and resolution regulations. Appropriate preparations should include active communication with customers whose contracts and services may be affected by Brexit, addressing the specific implications the United Kingdom's departure has for them.

In short, with the United Kingdom's withdrawal, British institutions providing services in Spain or in the rest of the EU will cease to enjoy the benefits of the European passport and the advantages for their business of being a gateway for business from third countries.

Many institutions have taken strategic decisions that involve setting up subsidiaries in the EU-27, enabling them to retain the benefits of the European passport. But others have yet to do so. Some have opted to strengthen their branches, which will have to be converted into

²¹ Royal Decree-Law 5/2019 of 1 March 2019 adopting contingency measures ahead of the withdrawal by the United Kingdom of Great Britain and Northern Ireland from the EU, without the agreement envisaged in Article 50 of the EU Treaty having been reached.

²² Royal Decree-Law 5/2019 further includes provisions on citizens, international law and order cooperation, other economic activities (customs, procurement, authorisations and licenses) and transport.

third-State branches, or to resort to national frameworks allowing direct access to markets by third-country institutions. The cross-border provision of financial services without a commercial establishment is not permitted in many Member States or is subject to strict authorisation requirements, as in the case of Spain for credit institutions.

From the supervisory standpoint, the ECB advocates a model that provides for appropriate supervision of the activities pursued in the Banking Union. In this connection, the subsidiaries model that avoids the creation of empty-shell structures or the cross-border large-scale provision of services appears preferable. The aim is to prevent regulatory arbitrage and to control those risks that cannot be satisfactorily resolved at the national level. The consequences of this relocation of business from the City of London to the EU remain to be seen. Some analysts point to cost increases and a loss of efficiency, but the process may act as a spur to speed through the Capital Markets Union, thereby strengthening the EU-27 internal market and financial sector.

BANCO DE ESPAÑA PUBLICATIONS

OCCASIONAL PAPERS

- 1201 ELOÍSA ORTEGA and JUAN PEÑALOSA: The Spanish economic crisis: key factors and growth challenges in the euro area. (There is a Spanish version of this edition with the same number).
- 1202 MARÍA J. NIETO: What role, if any, can market discipline play in supporting macroprudential policy?
- 1203 CONCHA ARTOLA and ENRIQUE GALÁN: Tracking the future on the web: construction of leading indicators using internet searches. (There is a Spanish version of this edition with the same number).
- 1204 JOSÉ LUIS MALO DE MOLINA: Luis Ángel Rojo en el Banco de España.
- 1205 PABLO HERNÁNDEZ DE COS and CARLOS THOMAS: El impacto de la consolidación fiscal sobre el crecimiento económico. Una ilustración para la economía española a partir de un modelo de equilibrio general.
- 1206 GALO NUÑO, CRISTINA PULIDO and RUBÉN SEGURA-CAYUELA: Long-run growth and demographic prospects in advanced economies.
- 1207 IGNACIO HERNANDO, JIMENA LLOPIS and JAVIER VALLÉS: Los retos para la política económica en un entorno de tipos de interés próximos a cero.
- 1208 JUAN CARLOS BERGANZA: Fiscal rules in Latin America: a survey.
- 1209 ÁNGEL ESTRADA and EVA VALDEOLIVAS: The fall of the labour income share in advanced economies.
- 1301 ETTORE DORRUCCI, GABOR PULA and DANIEL SANTABÁRBARA: China's economic growth and rebalancing.
- 1302 DANIEL GARROTE, JIMENA LLOPIS and JAVIER VALLÉS: Los canales del desapalancamiento del sector privado: una comparación internacional.
- 1303 PABLO HERNÁNDEZ DE COS and JUAN F. JIMENO: Fiscal policy and external imbalances in a debt crisis: the Spanish case.
- 1304 ELOÍSA ORTEGA and JUAN PEÑALOSA: Algunas reflexiones sobre la economía española tras cinco años de crisis.
- 1401 JOSÉ MARÍA SERENA and EVA VALDEOLIVAS: Integración financiera y modelos de financiación de los bancos globales.
- 1402 ANTONIO MONTESINOS, JAVIER J. PÉREZ and ROBERTO RAMOS: El empleo de las Administraciones Públicas en España: caracterización y evolución durante la crisis.
- 1403 SAMUEL HURTADO, PABLO MANZANO, EVA ORTEGA and ALBERTO URTASUN: Update and re-estimation of the Quarterly Model of Banco de España (MTBE).
- 1404 JUAN CARLOS BERGANZA, IGNACIO HERNANDO and JAVIER VALLÉS: Los desafíos para la política monetaria en las economías avanzadas tras la Gran Recesión.
- 1405 FERNANDO LÓPEZ VICENTE and JOSÉ MARÍA SERENA GARRALDA: Macroeconomic policy in Brazil: inflation targeting, public debt structure and credit policies.
- 1406 PABLO HERNÁNDEZ DE COS and DAVID LÓPEZ RODRÍGUEZ: Tax structure and revenue-raising capacity in Spain: A comparative analysis with the UE. (There is a Spanish version of this edition with the same number).
- 1407 OLYMPIA BOVER, ENRIQUE CORONADO and PILAR VELILLA: The Spanish survey of household finances (EFF): description and methods of the 2011 wave.
- 1501 MAR DELGADO TÉLLEZ, PABLO HERNÁNDEZ DE COS, SAMUEL HURTADO and JAVIER J. PÉREZ: Extraordinary mechanisms for payment of General Government suppliers in Spain. (There is a Spanish version of this edition with the same number).
- 1502 JOSÉ MANUEL MONTERO y ANA REGIL: La tasa de actividad en España: resistencia cíclica, determinantes y perspectivas futuras.
- 1503 MARIO IZQUIERDO and JUAN FRANCISCO JIMENO: Employment, wage and price reactions to the crisis in Spain: Firm-level evidence from the WDN survey.
- 1504 MARÍA DE LOS LLANOS MATEA: La demanda potencial de vivienda principal.
- 1601 JESÚS SAURINA and FRANCISCO JAVIER MENCÍA: Macroprudential policy: objectives, instruments and indicators. (There is a Spanish version of this edition with the same number).
- 1602 LUIS MOLINA, ESTHER LÓPEZ y ENRIQUE ALBEROLA: El posicionamiento exterior de la economía española.
- 1603 PILAR CUADRADO and ENRIQUE MORAL-BENITO: Potential growth of the Spanish economy. (There is a Spanish version of this edition with the same number).
- 1604 HENRIQUE S. BASSO and JAMES COSTAIN: Macroprudential theory: advances and challenges.
- 1605 PABLO HERNÁNDEZ DE COS, AITOR LACUESTA and ENRIQUE MORAL-BENITO: An exploration of real-time revisions of output gap estimates across European countries.
- 1606 PABLO HERNÁNDEZ DE COS, SAMUEL HURTADO, FRANCISCO MARTÍ and JAVIER J. PÉREZ: Public finances and inflation: the case of Spain.

- 1607 JAVIER J. PÉREZ, MARIE AOURIRI, MARÍA M. CAMPOS, DMITRIJ CELOV, DOMENICO DEPALO, EVANGELIA PAPAPETROU, JURGA PESLIAKAITĖ, ROBERTO RAMOS and MARTA RODRÍGUEZ-VIVES: The fiscal and macroeconomic effects of government wages and employment reform.
- 1608 JUAN CARLOS BERGANZA, PEDRO DEL RÍO and FRUCTUOSO BORRALLA: Determinants and implications of low global inflation rates.
- 1701 PABLO HERNÁNDEZ DE COS, JUAN FRANCISCO JIMENO and ROBERTO RAMOS: The Spanish public pension system: current situation, challenges and reform alternatives. (There is a Spanish version of this edition with the same number).
- 1702 EDUARDO BANDRÉS, MARÍA DOLORES GADEA-RIVAS and ANA GÓMEZ-LOSCOS: Regional business cycles across Europe.
- 1703 LUIS J. ÁLVAREZ and ISABEL SÁNCHEZ: A suite of inflation forecasting models.
- 1704 MARIO IZQUIERDO, JUAN FRANCISCO JIMENO, THEODORA KOSMA, ANA LAMO, STEPHEN MILLARD, TAIRI RÖÖM and ELIANA VIVIANO: Labour market adjustment in Europe during the crisis: microeconomic evidence from the Wage Dynamics Network survey.
- 1705 ÁNGEL LUIS GÓMEZ and M.^a DEL CARMEN SÁNCHEZ: Indicadores para el seguimiento y previsión de la inversión en construcción.
- 1706 DANILO LEIVA-LEON: Monitoring the Spanish Economy through the Lenses of Structural Bayesian VARs.
- 1707 OLYMPIA BOVER, JOSÉ MARÍA CASADO, ESTEBAN GARCÍA-MIRALLES, JOSÉ MARÍA LABEAGA and ROBERTO RAMOS: Microsimulation tools for the evaluation of fiscal policy reforms at the Banco de España.
- 1708 VICENTE SALAS, LUCIO SAN JUAN and JAVIER VALLÉS: The financial and real performance of non-financial corporations in the euro area: 1999-2015.
- 1709 ANA ARENCIBIA PAREJA, SAMUEL HURTADO, MERCEDES DE LUIS LÓPEZ and EVA ORTEGA: New version of the Quarterly Model of Banco de España (MTBE).
- 1801 ANA ARENCIBIA PAREJA, ANA GÓMEZ LOSCOS, MERCEDES DE LUIS LÓPEZ and GABRIEL PÉREZ QUIRÓS: A short-term forecasting model for the Spanish economy: GDP and its demand components.
- 1802 MIGUEL ALMUNIA, DAVID LÓPEZ-RODRÍGUEZ and ENRIQUE MORAL-BENITO: Evaluating the macro-representativeness of a firm-level database: an application for the Spanish economy.
- 1803 PABLO HERNÁNDEZ DE COS, DAVID LÓPEZ RODRÍGUEZ and JAVIER J. PÉREZ: The challenges of public deleveraging. (There is a Spanish version of this edition with the same number).
- 1804 OLYMPIA BOVER, LAURA CRESPO, CARLOS GENTO and ISMAEL MORENO: The Spanish Survey of Household Finances (EFF): description and methods of the 2014 wave.
- 1805 ENRIQUE MORAL-BENITO: The microeconomic origins of the Spanish boom.
- 1806 BRINDUSA ANGHIEL, HENRIQUE BASSO, OLYMPIA BOVER, JOSÉ MARÍA CASADO, LAURA HOSPIDO, MARIO IZQUIERDO, IVAN A. KATARYNIUK, AITOR LACUESTA, JOSÉ MANUEL MONTERO and ELENA VOZMEDIANO: Income, consumption and wealth inequality in Spain. (There is a Spanish version of this edition with the same number).
- 1807 MAR DELGADO-TÉLLEZ and JAVIER J. PÉREZ: Institutional and economic determinants of regional public debt in Spain.
- 1808 CHENXU FU and ENRIQUE MORAL-BENITO: The evolution of Spanish total factor productivity since the Global Financial Crisis.
- 1809 CONCHA ARTOLA, ALEJANDRO FIORITO, MARÍA GIL, JAVIER J. PÉREZ, ALBERTO URTASUN and DIEGO VILA: Monitoring the Spanish economy from a regional perspective: main elements of analysis.
- 1810 DAVID LÓPEZ-RODRÍGUEZ and CRISTINA GARCÍA CIRIA: Estructura impositiva de España en el contexto de la Unión Europea.
- 1811 JORGE MARTÍNEZ: Previsión de la carga de intereses de las Administraciones Públicas.
- 1901 CARLOS CONESA: Bitcoin: a solution for payment systems or a solution in search of a problem? (There is a Spanish version of this edition with the same number).
- 1902 AITOR LACUESTA, MARIO IZQUIERDO and SERGIO PUENTE: An analysis of the impact of the rise in the national minimum wage in 2017 on the probability of job loss. (There is a Spanish version of this edition with the same number).
- 1903 EDUARDO GUTIÉRREZ CHACÓN and CÉSAR MARTÍN MACHUCA: Exporting Spanish firms. Stylized facts and trends.
- 1904 MARÍA GIL, DANILO LEIVA-LEON, JAVIER J. PÉREZ and ALBERTO URTASUN: An application of dynamic factor models to nowcast regional economic activity in Spain.
- 1905 JUAN LUIS VEGA (COORD.): Brexit: current situation and outlook.