CENTRAL BANK OF IRELAND **Circulated to Commission Members**

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FOR INFORMATION

BREXIT TASK FORCE: JUNE 2018 UPDATE

Brexit Task Force

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Executive Summary

- The Brexit focus of the UK government in recent weeks has been on customs issues, with the Prime Minister establishing two working groups to examine the "Customs Partnership" and "Maximum Facilitation proposals. Neither of these options are reported to be acceptable to the EU.
- UK GDP growth forecasts for the period 2018-2020 have been revised down in the Bank of England May inflation report.
- The overall UK commercial property market rebounded in 2017 despite the political and economic uncertainty surrounding the impact of Brexit. However, investment volumes in the Greater London area were down around 20 per cent year-on-year in 2018 Q1.
- Sterling has declined modestly against the euro since the March Task Force report, down just under 1 per cent. The decline of sterling against the dollar has been more sizeable, around 4 per cent of the same period.
- For the Irish economy, the largest Brexit effects are still through the effect of the exchange rate on imported goods prices from the UK. Merchandise trade data shows that food related exports to the UK were up 3.6 per cent in the year to the first quarter of 2018. Exports declined for some other sectors principally machinery and equipment.
- Strong demand for Dublin office space was recorded in the first quarter of 2018. This mainly reflects the growth of existing businesses rather than Brexit-related firm relocations. Engagement from UK-based firms may intensify over the coming year as the post-Brexit arrangements become clearer.
- Assessment of Brexit risks to banks' existing business continues to be conducted as part of business as usual supervision with the Brexit co-ordination group aiming for comprehensive assessment across both significant and less significant institutions.
- As previously noted, supervision teams have begun to see applications developments as Irish banks seek to ensure business continuity post Brexit.
- Further updates are provided on the large applications for foreign banks to relocate to Ireland that are under detailed consideration. In addition, a significant uptick in the number of intentions to apply for authorisation/expansion has been recorded.
- In the insurance sector, […] new formal applications have been received since April 2018 […] in addition to […] already in progress.
- There are currently […] Irish-authorised undertakings that exceed the PRA branch threshold of £500m UK Financial Service Compensation Scheme protected liabilities. […].

Supervisors are engaging with the undertakings, who are exploring options such as an initial third-country branch application in the UK, moving to full subsidiary authorisation in the short-medium term. Some undertakings are proposing other alternatives to branch or subsidiary establishment. These are currently being reviewed by supervisors.

- Central Bank continues to participate in the weekly EIOPA Brexit co-operation platform, where the plans of […] Irish authorised undertakings have been discussed to date, along with […] UK authorised undertakings planning to move to Ireland and one Gibraltar undertaking planning to transfer to Ireland.
- In relation to finding a central securities depository (CSD) solution to settle Irish securities (equities and ETFs) post Brexit, the Central Bank has continued its extensive engagement with the national stakeholders (Department of Finance (DoF) and NTMA) to outline the issue […] for consideration by the Financial Stability Group (FSG).
- [Omitted due to confidentiality]
- The Bank has also met with representatives of the Irish Stock Exchange (ISE) to discuss and challenge the core principles for any CSD solution identified by the Irish User Committee (IUC). Further engagements with the issuers, registrars, brokers and CSD providers are planned to […].
- The Securities and Markets Supervision Division (SMSD) recently contributed to an ESMA survey on cliff effects for asset management which related to cross border activities in the asset management sector and contingency planning
- In relation to Organised Trading Facilities (OTFs), SMSD […].
- The asset management sector applications pipeline (i.e. where firms had indicated an intention to apply) continues to convert into actual applications and overall application volumes are significantly higher than normal as a result of Brexit.
- AMS sent a Brexit specific questionnaire to all firms they supervise and have now analysed all responses.
- The Payment Institutions sector continues to grow given it is at the forefront of mobile/emerging technology developments. The growth in the pipeline of applicants seeking authorisation in Ireland to operate in the sector is being driven partly by Government focus on cultivating developments in this industry in Ireland and the result of the Brexit referendum in the UK.
- In respect of Retail Intermediaries, the pipeline of potential UK applicants engaging with the Bank with a view to making an authorisation application is growing, as the UK withdrawal date draws closer.

- Special Topic 1 provides an overview of the macroeconomic modelling work in relation to Brexit that has been undertaken at the Bank. More recently the work has centred around using the core structural model of the Irish economy (COSMO) to simulate the impact on Ireland arising from a range of potential Brexit related scenarios and exchange rate shocks.
- To model the impact of Brexit scenarios, theglobal model NiGEM was used to examine the impact of a hard Brexit on the UK. UK GDP is projected to be around 3.5 per cent lower in the long run compared to a no Brexit scenario. These results are then fed into the COSMO model to assess the impact on Ireland. The main channel comes through the fall in the level of external demand for Irish exports. Irish output would be reduced by around 3.2 per cent after 10 years. Employment would be down by around 2.5 per cent in the long run.
- The second Special Topic provides an overview of recently published work on the impact of non-tariff barriers on Irish trade. It is found that additional customs procedures and documentary compliance could lead to a 9.6 per cent decline in total trade between Ireland and the UK, which equates to a 1.4 per cent decline in total Irish exports and a 3.1 per cent decline in total Irish imports.
- Fresh foods, raw materials (such as metals and some intermediate inputs into firms' supply chains) and bulky goods are most exposed to delays.
- The third Special Topic examines data on the size and significance of EU 27 citizens' migration flows to and from the UK, as well as possible regional and sectoral impacts.
- EU nationals make up a sizeable proportion of the UK population with a higher concentration in the London region and in certain sectors. There is some evidence of a mismatch between skills and occupations linked to origin within the EU.
- It is too soon to say whether there is a distinct "Brexit effect" behind recent changes in migration flows, but there has been a significant and consistent decline in EU migration to the UK and an acceleration of emigration of EU citizens out of the UK as well as an increase in EU citizens acquiring UK citizenship. With a special focus on migration flows between Ireland and the UK, we see significant changes to the Irish migratory patterns vis-à-vis the UK.
- Modelled estimates of the net flow of EU immigrants to the UK show significant reductions adding to possible labour shortages in certain skill categories. These, and the lack of clarity surrounding the future UK migration rules, are adding considerable uncertainty and possibly confounding the adverse economic effects stemming from the UK decision to leave the EU.

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1. Introduction[1]

Following the Brexit referendum, the Central Bank's Financial Stability Committee (FSC) requested that a Task Force on Brexit implications be established on a permanent basis to monitor and assess developments in this area. The Brexit Task Force (BTF) provides updated information regarding political, economic and financial market developments, risks arising for firms supervised by the central Bank and issues arising for the Central Bank itself, in particular with respect to authorisations. Furthermore, each report selects a number of issues or policy questions related to Brexit and provides an in-depth examination of these areas.

This seventh BTF Report follows the seventh meeting of the Task Force on 12 February. The layout of the Report is as follows. Section two provides an update on political developments, the performance of the UK economy and property market and financial market movements over the past three months. Section three discusses the changes to the outlook for the Irish economy and property market in the context of Brexit. Section four provides an overview of latest developments in relation to banks, insurance and asset management firms, payments institutions and market infrastructures. In Section five, information relating to queries received by the Central Bank in relation to potential applications for authorisations is presented. Presented in section six is an overview of the work conducted by the various European Supervisory Authorities, the ECB and the SSM in relation to Brexit, including an overview of the participation of Central Bank staff in this work. Sections seven, eight and nine provide in-depth analysis on three special topics. The first provides an overview of macroeconomic modelling carried out related to Brexit. The second examines non-tariff barriers to trade arising from Brexit and the third examines migration between the EU and UK.

[1] The following Divisions and Directorates are represented on the Brexit Task Force: AMSD, AMAI, BSSD, CPD, FMD, FRG, FSD, GSD, IEA, IR, SMSD, INSA, MPD, ORD, Risk, SRD, PSSD, RES, RCU. The report has also benefited from discussions with the Department of Finance. The Chair is the Director of Economics and Statistics, the Vice Chair is the Head of the Macro-Financial Division (MFD) and the Secretariat (Shane Byrne and Sofia Velasco) is provided by MFD.

2. Political and Market Developments

2.1. Political UK Developments[2]

2.1.1. Article 50 Negotiations State of Play

The December European Council (EU27) confirmed that "sufficient progress" had been reached on citizens' rights, the financial settlement and Ireland and adopted guidelines to move to the next phase of the Brexit negotiations.

The March EUCO (EU27) welcomed the agreement reached by the EU and UK negotiators on parts of the legal text of the Withdrawal Agreement including transition. The Council noted Prime Minster May's written assurances notably regarding Ireland/Northern Ireland, where legal text has not been agreed, and where PM May committed to codifying the 'backstop option'[3] set out in the Joint Progress Report of December 2017. The Guidelines include a note of caution in paragraph 1[4] which states that negotiations can only progress as long as all commitments undertaken so far are respected in full, and that nothing is agreed until everything is agreed.

The March EUCO (27) restated the EU's determination for 'as close as possible a partnership with the EU' while noting that the UK's stated positions limit the depth of such a future partnership and adopted guidelines for the opening of negotiations on the future relationship including a balanced, ambitious and wide-ranging free trade agreement based on a level

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[2] Our thanks to the Department of Finance for providing the background information on the latest political developments.

[3]Para 49: The UK "remains committed to protecting North-South cooperation and to its guarantee of avoiding a hard border. Any future arrangements must be compatible with these overarching requirements. The United Kingdom's intention is to achieve these objectives through the overall EU-UK relationship. Should this not be possible, the United Kingdom will propose specific solutions to address the unique circumstances of the island of Ireland. In the absence of agreed solutions, the United Kingdom will maintain full alignment with those rules of the Internal Market and the Customs Union which, now or in the future, support North-South cooperation, the all-island economy and the protection of the 1998 Agreement."

[4] Paragraph 1: The European Council welcomes the agreement reached by the negotiators on parts of the legal text of the Withdrawal Agreement covering citizens' rights, the financial settlement, a number of other withdrawal issues and the transition. The European Council recalls that other issues still require agreement and negotiations can only progress as long as all commitments undertaken so far are respected in full, and welcomes in this respect Prime Minister May's written assurances notably regarding Ireland/Northern Ireland. The European Council calls for intensified efforts on the remaining withdrawal issues as well as issues relating to the territorial application of the Withdrawal Agreement, notably as regards Gibraltar, and reiterates that nothing is agreed until everything is agreed.

playing field and taking account of the fact that such an agreement cannot offer the same benefits as membership.

The focus of the negotiations now is the lead up to the June EUCO which is scheduled to review progress in relation to outstanding Withdrawal Agreement items (incl. Ireland/Northern Ireland). The Council will also return to the future relationship framework, with the overall timetable envisaging finalisation of the Withdrawal Agreement and agreement on a political declaration on the future EU-UK relationship at the October EUCO.

Three rounds of negotiations have taken place since the March EUCO with two more rounds scheduled before the June EUCO. Progress to date has been limited, though it is hoped that there will be progress in most areas ahead of the June meeting. [Omitted due to confidentiality].

2.1.2. UK Position

The current political dynamic in the UK would appear challenging with the Government losing fifteen (15) votes to date in the House of Lords on the Withdrawal Bill.

The Brexit focus of the Government in recent weeks has been on customs issues, with the Prime Minister establishing two working groups to examine the "Customs Partnership" and "Maximum Facilitation" proposals, both of which are being considered in the context of resolving issues surrounding the Northern Ireland 'backstop'. It is notable, however, that neither of these options are acceptable to the EU.

On 15 May, the Prime Minister announced plans to publish a Brexit White Paper ahead of the June EUCO, which would set out the UK's priorities for its future relationship with the EU. The Prime Minister has previously outlined the UK's intention to leave the Customs Union and Single Market so that it can pursue trade deals with third countries outside of the EU, and it has also set out the objective of securing a bold and ambitious Free Trade Agreement with the EU covering both goods and services.

2.1.3. Irish Position

The Government remains clear on Ireland's headline priorities, which are: protect the peace process, no hard border, maintenance of the Common Travel Area, an effective transitional

arrangement leading to the closest possible relationship between the EU and the UK, and to work for the future of the European Union with Ireland at its heart.

In terms of the Ireland – Northern Ireland, the Government has been clear that its preference is to avoid a hard border through a wider EU-UK future relationship agreement, a view we share with the British Government. At the same time, the Government has outlined that a workable version of the backstop must be included in the Withdrawal Agreement. We must have certainty in all scenarios on the commitments made on Ireland and Northern Ireland.

Similarly, with regard to transitional arrangements, Ireland welcomes that the EU has proposed that the whole of the EU acquis will apply during the transition with the aim of avoiding any gaps or cliff edge effects between the UK leaving the EU and when a future relationship agreement enters into force.

Ireland wants the closest possible relationship between the EU and the UK, including on trade and, in this regard, has welcomed the confirmation in the March EUCO Guidelines of the EU's determination to have as close as possible a partnership with the UK in the future.

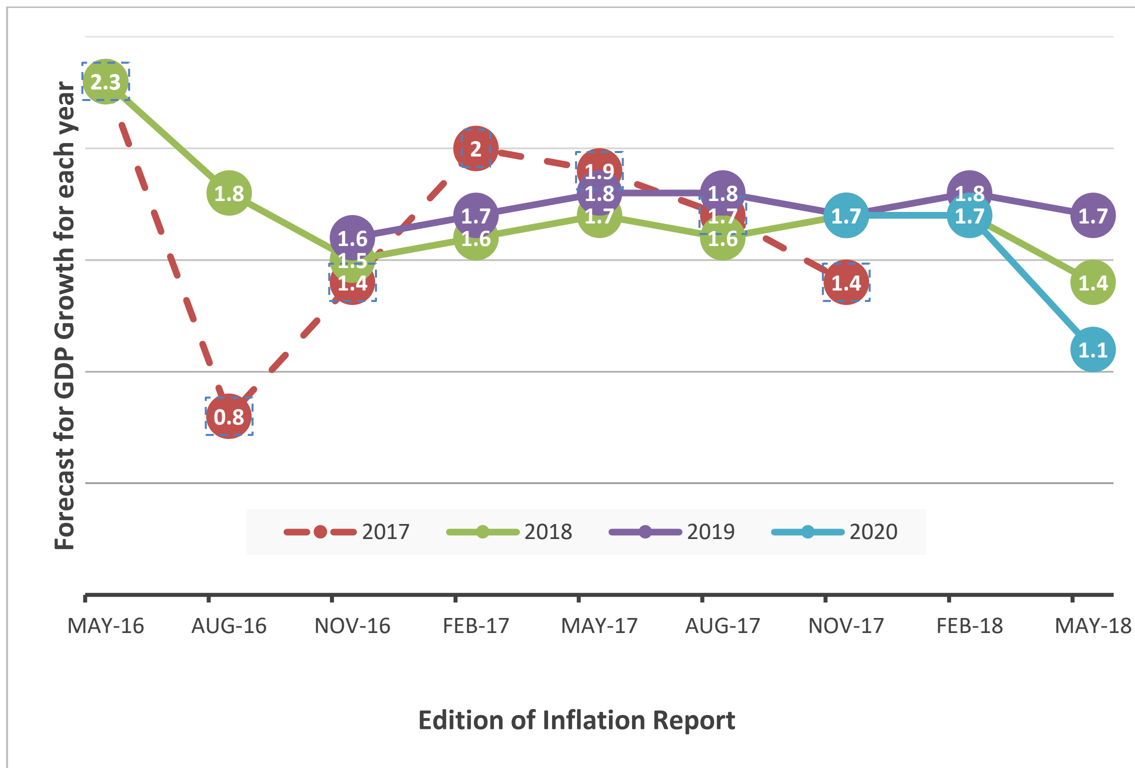
2.2. UK economic and property market developments

2.2.1. Macroeconomy

UK growth slowed down at the start of 2018. Real GDP grew by 0.1% quarter on quarter in 2018 Q1, underperforming by 0.3 percentage points the projections in the Bank of England's February Inflation Report. Some of this slowdown was attributed to temporary effects, like adverse weather conditions. In terms of composition, strong global growth and the depreciation of the sterling exchange rate have supported net trade and have shifted domestic demand away from imports. Growth in business investment has been steady but modest and business surveys currently no longer cite Brexit as a key factor holding back fixed capital formation. Consumption continued to expand at a steady rate of 0.3% quarter on quarter. This was nevertheless half the rate of the 2013-2016 quarterly average. Households appear still to be affected by reductions in real income following the post-referendum sterling depreciation. At the same time, the decline in the savings rate indicates that consumption growth could have been even weaker. Overall, the outlook is for GDP growth to bounce back in the short term, but to remain subdued.

Chart 2.2.1 shows the GDP growth forecasts for each year from 2017 to 2020, as they changed over time in each issue of the Inflation Reports, starting with the May 2016 report (quarter of issue of the report in the horizontal axis). Projections for 2018-2020 in May 2018 have been revised down compared to the previous Inflation Report in February 2018. Moreover, while the broad-based strengthening of global demand over the past year has led to some upward revisions, the forecast for 2018 is much lower than laid out prior to the Brexit referendum in May 2016.

Chart 2.2.1: Bank of England GDP growth forecasts (%) over time by Inflation Report



Source: Bank of England Inflation Report (May 2016-May 2018), author's calculations. The lines report the evolution of the forecast for GDP growth, according to each vintage of the *Inflation Report*.

On the supply side, productivity growth has been low since the crisis (see Graph 2.2.2). Meanwhile, there seem to be little slack in the economy. Until recently, population growth had contributed significantly to potential output, but potential labour supply may well slow down in the year ahead, given the role migration has played in the past. Net inward migration from the EU decreased, as shown in Chart 2.2.3, and the ONS forecasts an even sharper overall decrease in total net migration in the future. Other downside risks to net migration relate to a faster economic recovery in countries of origin and the outcome of the Brexit negotiations (see Special Topic 3 (Chapter 9) for a more in-depth analysis of migration in the UK).

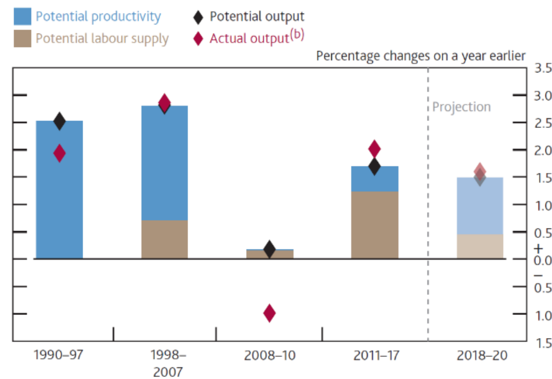
The current account deficit has narrowed to 3.6% of GDP in Q4 2017, despite the increase in the trade deficit. This was the smallest current account deficit since early 2012 and reflected higher returns on UK investments abroad. In terms of the financial account, with a net outflow of £65.7 billion in 2017, the UK was a net investor abroad in FDI for the first time since 2011. This was due mostly to increased investment overseas by UK residents.

CPI Inflation stood at 2.4% in April 2018. Overall, the expected contribution to inflation from higher import prices has been less than expected. Looking ahead, domestic factors are forecast to be the main contributors to CPI inflation in the coming year. With the

unemployment rate possibly falling further and below estimated equilibrium rates, inflationary pressures might arise even at modest levels of GDP growth.

At its meeting ending on 9 May 2018, the MPC voted to maintain the Bank Rate at 0.5.

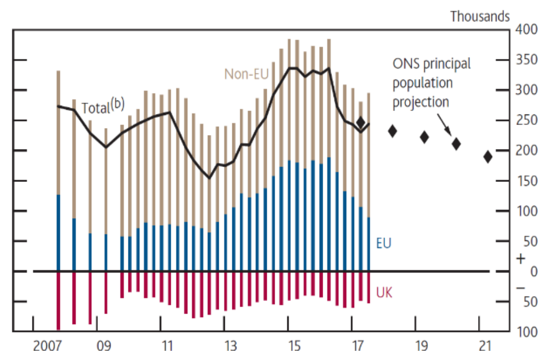
Chart 2.2.2: Decomposition of estimated potential output growth [a]



` Source: Bank of England calculations on ONS data.

(a) Annual averages. Faded diamond and bars are projections.
(b) Chained-volume measure

Chart 2.2.3: Decomposition of net inward migration by nationality [a]



` Source: Bank of England calculations on ONS data

(a) Rolling four-quarter flows. Data are half-yearly to December 2009 and quarterly thereafter, unless otherwise stated. Figures by nationality do not sum to the total prior to 2012.
(b) Data are half-yearly to December 2011 and quarterly thereafter.

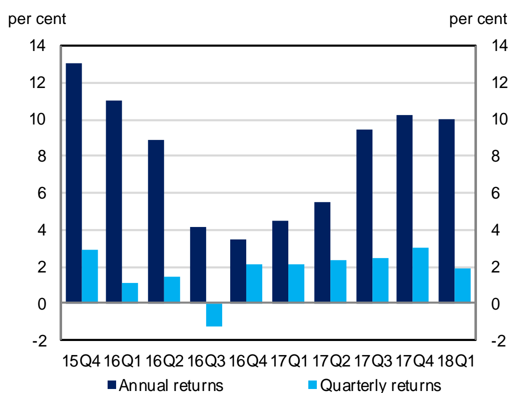
2.2.2. Property market

Commercial property market values

UK property investors realised total returns of 1.9 per cent in the opening quarter of 2018, down from 3 per cent in the final three months of 2017Q4 and from 2.2 per cent in 2017Q1, Chart 2.2.4. Annual commercial property returns have been relatively stable in recent quarters and remained at approximately 10 per cent at the end of 2018Q1, compared to 4.5 per cent a year earlier. Having surpassed pre-referendum values in 2017Q2, UK capital values posted a further increase of 0.8 per cent in the first quarter of 2018, leaving them 4.5 per cent above their 2016Q2 level. Similarly, the commercial rental index is 3.4 per cent higher than its June 2016 mark, following a quarterly rise of 0.3 per cent in 2018Q1.[5]

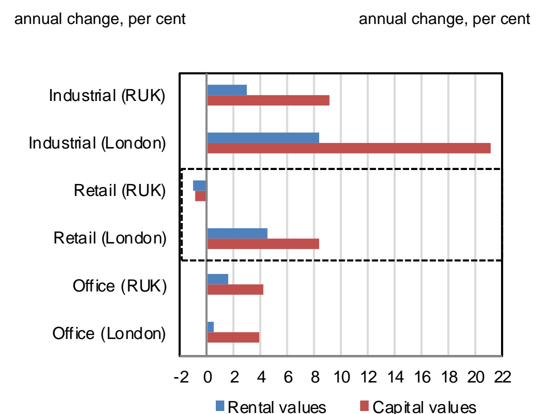
Behind the aggregate data, there are notable divergences in performance across sectors and locations. The industrial property market has performed particularly strongly over the past couple of years, on the back of a particularly buoyant London market, where annual industrial CRE capital value and rental growth reached 21 per cent and 8.4 per cent respectively in 2018Q1, Chart 2.2.5.[6] Annual capital and rental value growth was also quite solid for industrial properties across the rest of the UK (RUK), at 9.2 per cent and 3 per cent respectively.

Chart 2.2.4: Total returns on UK commercial property



Source: MSCI/IPD and Central Bank of Ireland calculations

Chart 2.2.5: UK CRE capital and rental value growth by sector and location



Source: MSCI/IPD and central Bank of Ireland calculations

[5] Annual capital and rental values increased by 5.1 per cent and 2 per cent respectively, in 2018Q1.
[6] The entire UK industrial property market registered annual capital growth of 14.5 per cent and annual rental value growth of 5.3 per cent in 2018Q1.

Conditions in the broader office and retail markets have been a little more subdued, as investor appetite appears less disposed to traditional income producing property assets, and more favourable to alternatives such as residential and healthcare.[7] Annual capital values and rents across the entire retail property market increased by 1.1 per cent and 0.9 per cent respectively in 2018Q1. Again, the rate of growth in the London market was markedly higher than that recorded across much of the rest of the UK, where values declined on an annual basis, Chart 2.2.5.

On the face of it, the performance of the UK office market has been relatively stable in the opening quarter of 2018. Capital values were growing at 3.7 per cent annually, rents were 1.1 per cent higher and both have surpassed their pre-Brexit vote levels. In general, market rents were weaker in the London office market, Chart 2.2.5, as investor incentives, such as shorter lease terms and an increase in the prevalence of leases break clauses, increase.

Commercial property market investment

Investment volumes in the UK commercial property market rebounded somewhat in 2017, despite the political and economic uncertainty surrounding the impact of Brexit, Chart 2.2.6. According to LSH research,[8] £59 billion of investment transactions took place in 2017, an increase of almost one-third on the 2016 figure. The latest data show £13.6 billion of CRE purchases occurred in 2018Q1, the second highest first quarter figure over the past ten years, and 5 per cent higher than the 2017Q1 equivalent. Investment in regional UK CRE markets (£5.7 billion) increased significantly in the opening quarter of 2018, up 46 per cent on the same figure for 2017Q1. In contrast, commercial property investment volumes in the Greater London area were down by one fifth, to £5.3 billion.

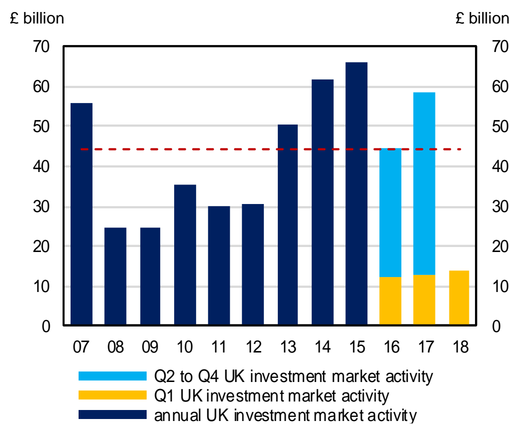
Despite some recent decline, UK purchasers remain the principle source of investment into the UK commercial property market, accounting for almost 60 per cent of the 2018Q1 total (Chart 2.2.7). While the influence of overseas investors has been growing, things were a little quieter in 2018Q1. The £5.5 billion spent by foreign buyers in the first three months of the year was the lowest quarterly volume in 18 months and 20 per cent below trend level, according to LSH. Almost 40 per cent of this sum originated in the Far East, with US investors contributing a further 20 per cent. The majority of overseas, particularly Asian and Middle Eastern investment is concentrated in the London market. While greater involvement of international capital can serve to broaden a country's commercial property investor base and help increase

[7] See "*London offices: Initiating coverage as declines and uncertainty forecast*", May 2018, available from Goodbody.

[8] See "UKIT Q1 2018", Lambert Smith Hampton

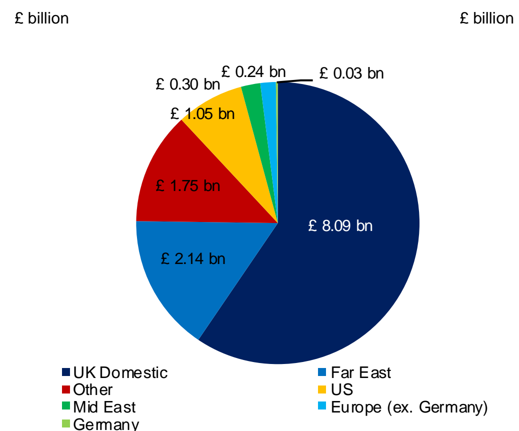
market liquidity, it can also leave the sector more exposed to changes in investor perceptions and/or to changes in external financing conditions.

Chart 2.2.6: Annual value of UK CRE transactions



Source: LSH – UK Investment Transactions Bulletin Q1 2018

Chart 2.2.7: Breakdown of UK investment flows



Source: LSH – UK Investment Transactions Bulletin Q1 2018

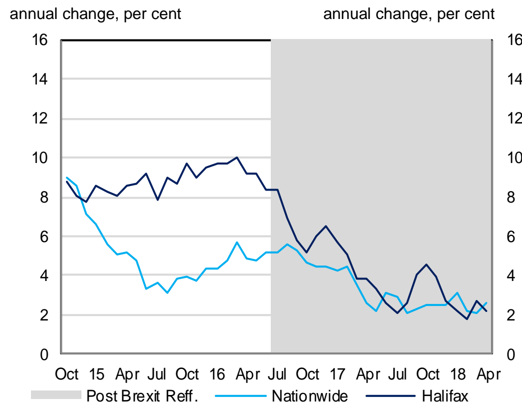
UK House Prices

UK residential property prices have continued to grow at low, steady rates since the beginning of the year Chart 2.2.8. The Halifax and Nationwide house price indices rose 2.2 per cent and 2.6 per cent year-on-year respectively in April 2018, compared to annual growth rates of 3.8 per cent and 2.6 per cent respectively at the end of April 2017. The outlook for the UK housing market remains uncertain, as it has been for some time since the Brexit-referendum. According to the RICs residential market survey,[9] near term indicators are flat for both sales and price expectations at a national UK level, with expectations of modest gains expected in some regions, offset by expected declines in other parts of the country. In particular, pricing conditions in the middle and upper tiers of the UK housing market were reported to be challenging. Further ahead however, a majority of those surveyed anticipate higher prices in a year's time.

Meanwhile, according to the most recent data from Finance UK, mortgage market activity remains flat, with a slight slowdown during the first quarter of 2018. The number of mortgages drawn down in the opening quarter of 2018 was 600 lower than for the equivalent quarter in 2017. This comes on the back of a 1.2 per cent annual increase in drawdowns during 2017 to 813,000 Chart 2.2.9.

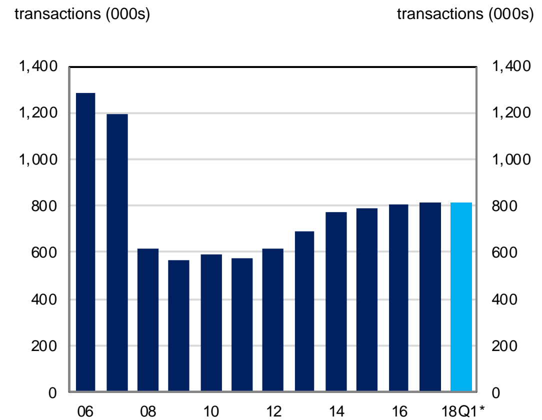
[9] See "April 2018: UK residential market survey", RICS

Chart 2.2.8: Annual growth in UK house prices



Source: Halifax and Nationwide HPIs (via datastream)

Chart 2.2.9: UK residential mortgage drawdowns



Source: UK Finance

Note: 2018Q1 data are the rolling 4 quarter total.

2.3. Financial market developments

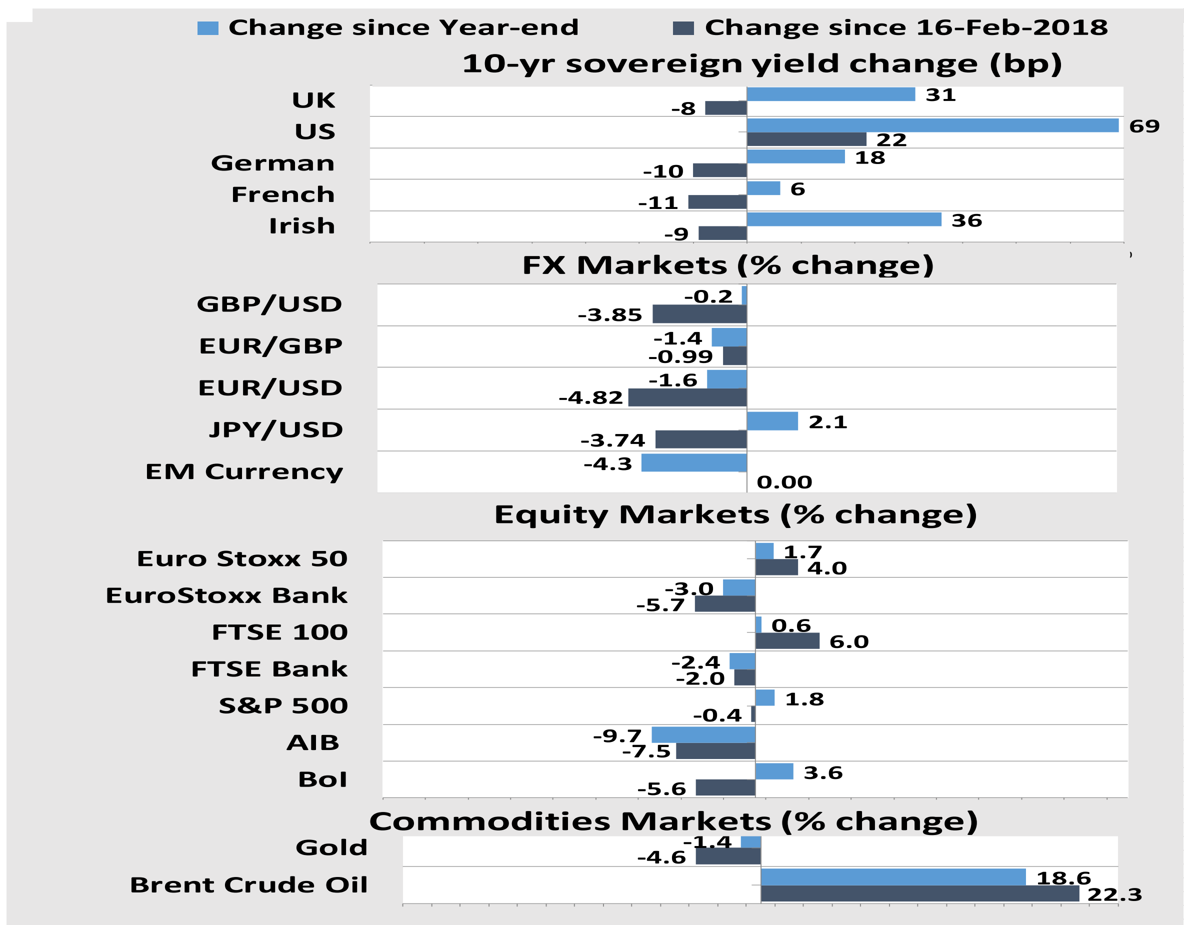
The following section provides an update on the main financial market developments, covering the period since the last update to the Financial Stability Committee (FSC) from 16 February to 16 May. Section 2.3.1 provides an update on primary market themes over this period, and section 2.3.2 discusses specific UK market developments. In summary, global bond yields have been mixed; US bond yields have risen on the prospect of tighter US monetary policy and expectations of sizeable issuance by the US Treasury, while core euro area and UK bond yields have fallen, owing predominantly to weak economic data and reduced expectations of monetary policy tightening.

The US dollar strengthened against its major peers, with the Bloomberg dollar spot index having appreciated by over 4 per cent since the February FSC meeting, in anticipation of a faster pace of US rate hikes. Oil prices increased significantly over the period (currently $79.68) owing to rising geopolitical concerns on Iran, a continuing collapse in Venezuelan oil production and suggestions that OPEC will extend the time horizon of its production cuts.

2.3.1. Key market themes

Chart 2.3.1 below summarises the main market moves from 16 February 2018 to 16 May 2018. The key markets themes included:

Chart 2.3.1: Main market moves (Year-end and 16 Feb 2018 to 16 May 2018)



- The euro has relinquished the gains made in the early part of the year, falling by nearly 5 per cent from a peak of $1.2555 on 16 February to a current rate of $1.1820. The euro sell-off partly reflects disappointing euro area economic data in Q1. The Citi Economic surprise index, which measures data surprises relative to market expectations, fell to its lowest level since July 2011. The euro's reversal also accounts for the prospect of continued rate and balance sheet normalisation in the US leading to further divergence of US and euro area interest rate cycles.
- Core euro area government bond yields have fallen modestly since the last FSC meeting in February, with the German 2 and 10-year yields falling by 4bps and 7bps respectively to -0.51 per cent and 0.63 per cent. Market reaction to the ECB's Governing Council meeting in April was muted, as there were no major changes to communication or forward

guidance. However, President Draghi did acknowledge the threat of increased protectionism, the need to monitor closely the exchange rate and the possible implications for the inflation outlook.

- The 10-year Italian bond spread to Germany has widened from a low of 113bps in mid-April to a current level to 150bps amid signs that the far right Northern League and the anti-establishment 5-Star Movement will form a coalition government. A draft paper by the two parties calling for a €250bn Italian debt write-off by the ECB unsettled the markets. The two parties have subsequently dropped this request from their final policy plan but the proposal has rekindled investor fears of Italy's anti-euro sentiment. Other peripheral markets (Spain and Portugal) remain underpinned on well-received auctions and credit rating upgrades.
- Market based euro area inflation expectations have been largely unresponsive to the spike in crude oil prices. The euro area 5-year, 5-year forward inflation swap rate declined marginally from 1.75 per cent to 1.73 per cent.
- US bond yields have increased since the last FSC meeting, the 2-year US Treasury yield spiked from 2.17 per cent to 2.58 per cent, while 10-year Treasury yield has risen by 23bps to 3.10 per cent. The statement from the May FOMC meeting indicated that policymakers continue to expect rate normalisation to be "gradual and data dependent". The Federal Reserve (Fed) expects inflation to "run near the Committee's symmetric 2 per cent". The introduction of the word "symmetric" potentially paves the way for the Fed to tolerate a modest overshoot of inflation above its target. The probability of three further US rate hikes by the end of 2018 has increased from 21 per cent to 42 per cent on heightened inflation expectations and tighter labour market conditions. In addition, heavy issuance continues to weigh on US Treasury yields. Jefferies project that Treasury borrowings will increase by $405bn in 2018.
- The UK, euro area and Japanese equity markets posted gains of 3 to 5 per cent over the last quarter as export sensitive sectors have benefitted from currency depreciation. US stocks were largely unchanged, better than expected Q1 earnings offset the negative effect of rising US borrowing costs and a stronger dollar. Chinese equity markets lagged other developing markets on persistent fears of a trade war between the US and China, while emerging markets underperformed, particularly countries with high debt levels and heavy funding needs in the face of a stronger dollar.
- Brent crude prices rose to a new three and a half year high of $80 per barrel, up from just under $65 per barrel in mid-February. Prices have appreciated on President Trump's decision to withdraw from the 2015 nuclear agreement with Iran and to re-institute

sanctions, the collapse of Venezuelan oil production and signs that OPEC and non-OPEC members are receptive to an extension of the current quota agreement beyond 2018. The International Energy Agency have predicted that oil inventories will fall below the 5-year average, OPEC's stated target, by the end of Q2 2018. Over this period, gold prices have fallen by just under 1.5 per cent to $1291 per ounce owing to dollar strength and the subdued inflationary outlook.

2.3.2. Update on Brexit process and related market moves

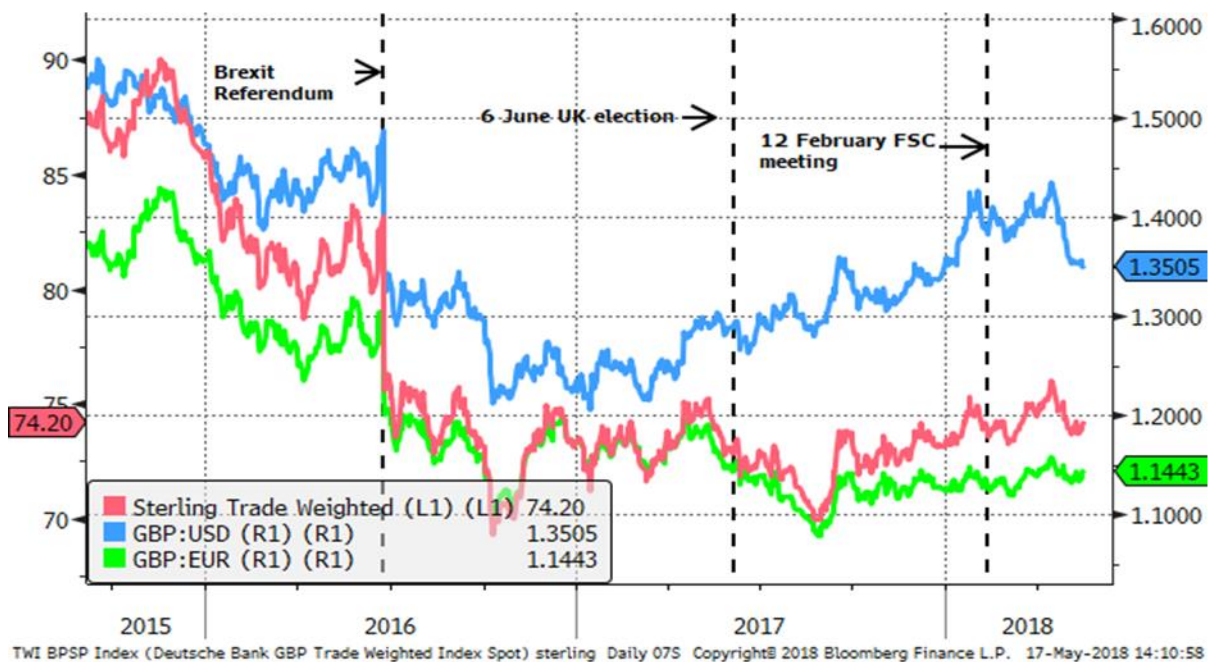
There has been little headway on the major topics surrounding Brexit, but at present, they are not key market drivers. Markets will continue to focus on issues such as amendments to the Withdrawal Bill (passed by the House of Lords and due to go through the House of Commons in the second half of May), Prime Minister May's custom partnership model and the Irish border.

In relation to UK market moves, a (perceived) dovish interview on 19 April by BoE Governor Carney led to the pricing out of the expectations of a UK rate hike at the May meeting (the market-implied probability fell from 90 per cent to a pre-meeting level of 12 per cent). Governor Carney focussed on the general trajectory of rates, acknowledging that an interest rate rise is "likely" this year, but played down the precise timing of a rate hike. He stated that any increases should be gradual as major decisions are due on Brexit (including on the implementation period and the shape of a final deal).

Sterling has declined modestly against the euro since the last FSC meeting (down just under 1 per cent), and endured more sizeable losses of nearly 4 per cent against the US dollar (see Chart 2.3.2 below). Weak economic data, Brexit uncertainty and a dovish reading of the BoE meeting in May have seen sterling decline from a peak of $1.4377 on 17 April to just under $1.35 at present.

The UK yield curve has flattened significantly since the last FSC meeting. The yield differential between 2 year and 10 year gilt yields has tightened from 92bps to 70bps. The 2-year gilt yield has risen by 17bps to 85bps, in contrast, 10-year yields are down by 5bps to 153bps (see chart 3 below). The 10 year gilt yield has stabilised on declining UK inflation risks. The 2-year UK bond yield has risen despite some disappointing economic data over Q1 (including GDP, retail sales, Purchasing Manager Indices (PMIs) and industrial production) owing to short-term inflation expectations moving higher.

Chart 2.3.2: Selected sterling exchange rates



3. Impact on Irish economy

3.1. Latest economic developments

The economic outlook remains positive with growth forecasts revised upwards by the Bank in its most recent Quarterly Bulletin (April). GDP growth of 4.8% is anticipated this year and 4.2% in 2019. These forecasts are likely to be revised upwards modestly in the July Quarterly Bulletin given recent data releases and external assumptions. The labour market and domestic economy continue to perform strongly with close to full employment conditions expected by the end of next year with the unemployment rate falling below the 5% mark. In April, the monthly unemployment rate fell to 5.9% - its lowest level since 2008. Underlying domestic demand (which removes volatile investment components from spending) is expected to register growth of 4.7% this year, moderating to 4.0% in 2019.

While the economic outlook remains robust, Brexit related risks and specifically any escalation in trade frictions between the UK and the EU has the potential to materially damage living standards in Ireland relative to the counterfactual of maintaining the status quo. So far, the strong growth in the domestic economy coupled with positive global economic conditions have allowed the Irish economy to absorb Brexit related impacts. To date these have been predominantly felt via a pass through of a weaker sterling exchange rate to consumer prices. The latter remain very weak in part due to the heavy weighting of UK goods in the Irish consumer basket. The inflation rate fell by 0.2% in April leading to an annual rate of inflation of -0.1%, with a strong downward impulse from goods prices.

Over the next few months, the resolution of the current uncertainty about the nature of future UK-EU relations has the potential to generate further economic and financial market volatility, especially if there is an increasing likelihood of a hard Brexit. At a macroeconomic level (and also relative to the EU), Ireland remains very exposed to Brexit, particularly if there is a downward shift in the prospects for the UK economy and/or a further depreciation in sterling. In addition, if there is a shift in the regime governing UK-EU trade, this is likely to necessitate a costly diversion of resources to setting up new logistics and trade-processing systems. If the costs of importing and exporting go up (including extra transit time and additional administrative burdens), the range of imported goods available to Irish consumers and firms may shrink, while domestic firms will find it more difficult to access export markets.

Output and trade – signs remain mixed. To date in 2018, analysts are reliant on monthly merchandise trade and production data. These series are volatile and it is preferable to wait until first quarter national accounts data (due in the summer) before drawing any firmer

conclusions. That said, trade data were relatively muted in the first quarter (and noticeably so in March). Merchandise exports increased (in value terms) by 4.3% in the first quarter with food exports (UK orientated) up 0.9%. Within this, exports to Great Britain were up 2.4% with imports up 8.1%. From Eurostat data, a more detailed breakdown of trade with the UK is available. In the first quarter, food related exports were up 3.6% year-on-year with the other biggest export sector – chemicals, registering a 10.8% increase. These offset some large declines in exports from other sectors – principally machinery and equipment.

On the output side, the monthly industrial production data were weak in the first quarter of the year. For the indigenous sector, output was down 8.7% (in real terms). Within this, output in the food sector fell by nearly one-fifth. These data are however volatile and perhaps reflect adverse weather in the early part of the year. Similar to the case for the merchandise trade statistics, it is preferable to wait for the first quarter national accounts data (due in the summer) for more definitive and complete numbers.

Consumption – remains robust. Retail sales data show that core sales (i.e. sales excluding motor trades) grew by 4.3% in the first quarter of 2018 (matching the growth recorded in 2017). Headline retail numbers have been dragged down by weak new car sales. This appears to be Brexit related with the decline in sterling providing incentives for cross border imports.

Sentiment – softened recently but still high. The April survey on savings and investment from the Bank of Ireland/ESRI noted a pick-up in savings although the vast majority of respondents (92%) stated that Brexit was not affecting saving patterns.[10] Within this, younger savers and persons outside of Dublin appeared marginally more concerned about Brexit. On the consumer side, the ESRI/KBC Bank Consumer Sentiment Index declined in April (with the weakest reading since last December) in part due to fears relating to oil prices and trade wars. The headline PMI indicators for manufacturing, construction and services were all strong in April.

[10] 51% of respondents said they were regular savers in April (up from 46% in March).

3.2. New and on-going research

There have been a number of publications by economists within the Bank on Brexit related issues. These are summarised in Special Topic 1 and 2 within this report. Staff also presented at the 2018 Irish Economics Association Annual conference on Brexit related themes. These included papers on modelling the impact on Ireland of external shocks and the impact of non-tariff barriers on trade.

In March, the Department of Finance produced a report Brexit: Analysis of Import Exposures in an EU Context. This builds on previous work by the Department examining the export sector.[11] The report notes the high (albeit declining) share of imports from the UK (23% of goods imports (€17 billion)). Despite this declining share, Ireland remains the most exposed EU country in terms of imports from the UK (13 of the 15 most exposed sub-sectors are in Ireland).[12] Similar to exports, exposures are highest in the food and live animals sector (48% of imports are from the UK). One important difference between exports and imports is that Ireland's import exposures are less concentrated than is the case for exports.[13] The report also highlighted potential supply chain disruptions and the likely disproportionate impact on SMEs as well as specific concerns for the retail, agriculture and pharmaceuticals sectors. Ireland is less exposed on the services side with 6% of imports and 16% of exports destined for the UK.

3.3. Property sector

Irish Property Market: Commercial property

Total returns, capital values and rental growth

Irish commercial property returns have come back into line with other international markets (Chart 3.3.1). Annual CRE returns of 6.4 per cent for 2017, place Ireland at the 25th percentile in a cross-country sample of 31 countries, above markets such as Italy, Poland and Denmark, but much lower than Spain, Hungary and the Netherlands where annual returns exceeded 12 per cent.[14] Overall, annual capital values were 2.1 per cent higher at the end of 2018Q1,

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[11] See: UK EU Exit: Trade Exposures of Sectors of the Irish Economy in a European Context, Department of Finance, September 2017.

[12] Ireland's import exposures were 4 times higher than the 2nd most exposed country (Cyprus). Gas is the most exposed sub-sector with all imports sourced from the UK.

[13] Ireland's export exposures to the UK are heavily concentrated in the food/animals and chemical sectors. Overall, Ireland runs a trade in services surplus with the UK and a deficit on the goods side.

[14] According to 2018Q1 data for a much smaller selection of countries, including Ireland, annual CRE returns were 13.8 per cent (Netherlands), 10 per cent (UK), 7.1 per cent (USA) and 6.8 per cent (Ireland).

compared to 6.1 per cent in 2017Q1.[15] Similarly, the rate of annual rental growth eased by approximately 3 percentage points, to 3.5 per cent in the opening quarter of the year.[16]

The industrial/logistical property sector has performed solidly in recent years, owing to a lack of supply and greater demand for large modern logistical facilities with easy access to main transport routes. Industrial property capital values rose 2 per cent year-on-year in 2018Q1, accompanied by a 6 per cent increase in rents (Chart 3.3.2). Capital growth in the retail sector for all, but prime locations, has been relatively weak of late. Annual growth of 0.2 per cent was recorded in the first quarter of 2018. Retail rents increased 3.3 per cent over the same period, owing to the growth of shopping centre rents in particular. Market intelligence from private sector sources such as CBRE suggest that there is a reluctance from those involved in the industrial/logistics/retail commercial property sectors to expand or roll out new stores until there is more clarity on the outcome of Brexit negotiations.[17]

The office sector, which has driven much of the recovery in overall commercial property capital values and rents since 2013, has also seen the pace of capital value and rental growth decline. The annual growth of office capital values fell from 6 per cent in 2017Q1 to 2.6 in the first quarter of this year, while the rental growth rate fell 4 percentage points to 3.2 per cent.

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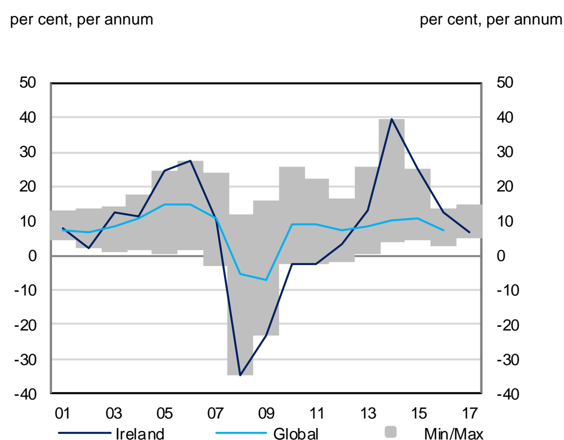
[15] There has been a 78 per cent cumulative increase in CRE capital values since they bottomed-out in the first half of 2013. As a result, the CRE capital value index is some 42 per cent lower than its 2007 value.
[16] Following a cumulative rise of 60 per cent since 2013, commercial rents are 19 per cent below their 2008 peak.
[17] See "*Ireland Bi-Monthly Research Report, May 2018*", CBRE

Chart 3.3.1: Total annual returns across selected international markets

per cent, per annum | per cent, per annum

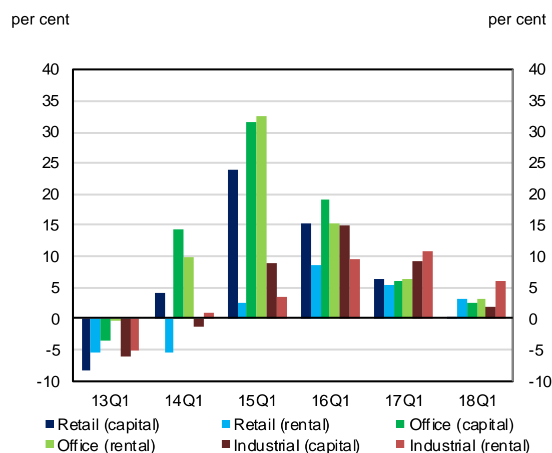


Source: MSCI/IPD

Note: Grey bars signify the relevant maximum and minimum annual total returns observation (in local currency) across a number of international markets, including: Australia, Austria, Belgium, Canada, China, Czech Rep., Denmark, Finland, France, Germany, Hong Kong, Hungary, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Netherlands, New Zealand, Norway, Poland, Portugal, Singapore, Spain, Sweden, Switzerland, Taiwan, Thailand , UK & USA

Chart 3.3.2: Breakdown of commercial property capital values and rental growth by sector

per cent | per cent



Source: CBRE, JLL and Central Bank of Ireland calculations

Notes: Dublin office vacancy refers to the average of the available end-quarter data from the year in which they relate.

Take-up and vacancy rates

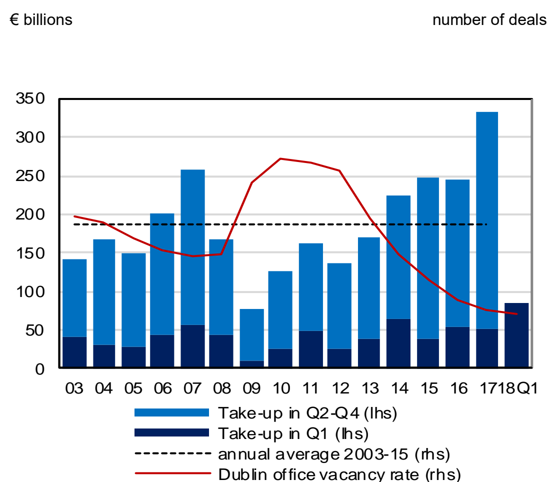
Some 83,500 square meters of Dublin office space was leased during the first three months of 2018, a 70 per cent increase on the equivalent quarter in 2017, and one of the strongest opening quarters on record (Chart 3.3.3). The high volume of leasing which has occurred in recent years has seen the vacancy rate in the Dublin city office market drop to 6 per cent, lower than the average across many other major European cities. With the resumption of commercial property development activity, approximately 2.5 years of average annual Dublin city office take-up is currently under construction and due to come on-stream by 2020. A similar amount of planned new office space has been granted (or is awaiting) planning permission and may be called upon if required. The addition of some or all of this space in a prudent fashion should ease pressure of prime office rents and help stabilise the office vacancy rate.

While any Brexit-related firm relocations have the potential to add to letting demand, the current demand for Dublin office space reflects the growth of existing businesses. Of the 60 transactions that occurred in 2018Q1, Irish companies undertook 28, while American and

British firms were involved in 16 and 7 deals respectively. Engagement from UK-based firms may intensify over the coming year as the post-Brexit arrangement becomes clearer.

The demand for Irish commercial property assets remained strong in the opening quarter of 2018, with the level of CRE investment (€ 930 million) almost double that of 2017Q1, owing in part, to three transactions of greater than €100 million each (Chart 3.3.4). There was a pick-up in new CRE lending activity amongst the Irish retail banks in the final quarter of 2017. New lending activity for 2017 as a whole reached €3.5 billion, up from €2.8 billion for the four quarters ending 2017Q3 and €3.1 billion in 2016. A large portion of this increase relates to refinancing deals and the provision of funding for residential property development. Notwithstanding the latest increase, new CRE lending activity constitutes a relatively small portion (12 per cent) of overall new lending by the Irish retail banks

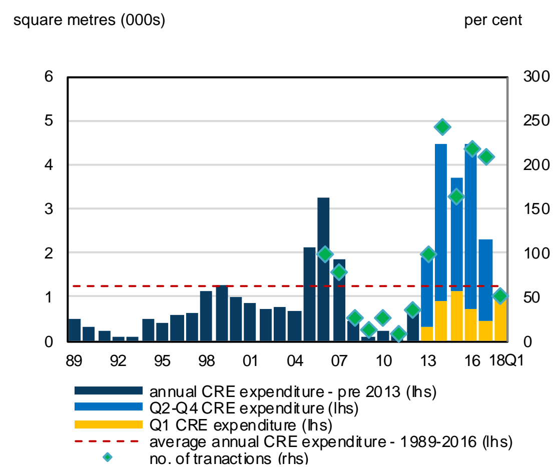
Chart 3.3.3: Expenditure on Irish commercial property



Source: CBRE, JLL and Central Bank of Ireland calculations

Note: Investment spending relates to individual transactions worth at least €1 million.

Chart 3.3.4: Dublin office market activity



Source: CBRE, JLL and Central Bank of Ireland calculations

Notes: Dublin office vacancy refers to the average of the available end-quarter data from the year in which they relate.

Residential property

In terms of the Irish housing market, the main issues relating to Brexit concerns supply and the ability of the market here to cope with a surge in demand for accommodation should there be a widespread relocation of UK based firms/workers here. Aside from the strain this would place on existing infrastructure, it is likely that house prices and residential rents (currently growing at 12.7 - March ‘18, and 6.5 per cent – April ’18, respectively), would also come under further upward pressure, at a time when there is a severe shortage of units for sale or rent.

4. Sectoral developments

4.1. Banking

Brexit impacts on the Irish banks (both those with domestic focus and those with large direct exposures to the UK) continue to be benign with no material impact reported on funding/liquidity or credit quality. As previously noted, and as discussed further below, supervision teams are have begun to see developments as Irish Banks seek to ensure business continuity post Brexit.

Assessment of Brexit risks to banks' existing business continues to be conducted as part of business as usual supervision, with the Brexit co-ordination group aiming for comprehensive assessment across both significant and less significant institutions. Given the cross sector nature of Brexit issues arising for CCPs and derivatives BSD has been engaging with other divisions on this issue.

4.1.1. Significant institutions

[Omitted due to confidentiality].

4.1.2. Less significant institutions

[Omitted due to confidentiality].

4.1.3. Brexit: Banking Authorisations Update

[Omitted due to confidentiality].

4.2. Insurance

4.2.1. Authorisations

A summary (as at May 2018) of the total Brexit authorisation activity within the Insurance directorate is set out below:

- […] Brexit related applications are currently under review,
- […] under review are new since April 2018 […].

- There are [...] Brexit related authorisations applications expected over the next 3 months these include a mix of third country branch and subsidiaries

[Omitted due to confidentiality].

4.2.2. Update on the impact on and preparedness of entities

The Insurance Supervision Team is currently reviewing the plausibility and robustness of proposed Brexit contingency plans.

On the 28 March 2018 following the public consultation of the PRA Approach to Branch Authorisation and Supervision of 20 December 2017, the PRA increased the threshold of UK Financial Services Compensation Scheme (FSCS) protected liabilities from £200m to £500m.

This means that for Irish undertakings currently writing business under FoS into the UK, who are in excess of the £500m threshold for eligible technical provisions, the PRA would expect a subsidiary establishment instead of a branch.

There are currently [...] Irish authorised undertakings captured by this threshold. [...]. Supervisors are engaging with such undertakings, and exploring options such as an initial branch application, moving to full subsidiary authorisation in the short –medium term. Some undertakings are proposing other alternatives to branch or subsidiary establishment. These are currently being reviewed by supervisors.

In April 2018, the Central Bank held a series of teleconference calls with the PRA/FCA to discuss some proposed contingency plans in more detail. The PRA Head of Insurance Supervision visited the Central Bank on Thursday 26 April to discuss thematic issues such as the proposed transitional period, approach to third country branch authorisation and certain undertakings [...], proposed Brexit plans in more detail.

The Brexit Insurance Supervisory Coordination Group (BISC) was set up following the Brexit Cliff Edge Effects report to the Supervisory Committee in January 2018. BISC is a cross directorate group which discusses prudential, consumer protection and legal considerations arising from Brexit. BISC discusses various contingency plans proposed, including for example the feasibility of using the overseas persons exemption under the UK Financial Services Markets Act (Regulated Activities Order)[18]. A number of Brexit Supervisory Workshops have

[18] Article 72 of the UK Financial Services Markets Act (Regulated Activities Order)

been held with the various supervision teams to consider all aspects of Brexit and impact on the undertakings operations and business model.

4.2.3. EIOPA cooperation platform on Brexit

The Central Bank participate in a weekly EIOPA co-operation platform teleconference call where different undertakings' contingency plans are discussed in more detail.

To date the following undertakings' contingency plans have been discussed:

[Omitted due to confidentiality].

The Central Bank provided two information requests on contingency planning for insurance undertakings through the platform. The first information request resulted in a report that went to EIOPA BoS in February 2018. The second information request was submitted to EIOPA on the 21 March 2018.

Representatives from the Central Bank will attend the Brexit Co-operation meeting in Frankfurt on Tuesday 29 May.

4.3. Asset management

4.3.1. Authorisations

The Asset Management Supervision Directorate (AMS) continues to have engagement with firms regarding Brexit and the authorisation process. [Omitted due to confidentiality]. Preparations to address increased authorisation and supervisory activities related to the UK's decision to leave the EU remain on course.

AMS is currently assessing [Omitted due to confidentiality].

In addition, […] that have been deemed likely to initiate the KFD / authorisation process, the majority of which would be Fund Management Company applications. A further […] firms have indicated that they will seek extensions or otherwise materially change the scale of their business models e.g. re-parenting branches from the UK entity to the Irish entity.

4.3.2. ESMA engagement

The ESMA Supervisory Co-ordination Network continues to meet regularly to discuss cases of authorisation requests and issues of supervision/enforcement arising from investment firms, asset managers and trading venues seeking to relocate from the UK. [Omitted due to confidentiality].

[Omitted due to confidentiality].

4.3.3. Analysis of firms' Brexit preparation responses

In November 2017, a Brexit specific questionnaire was issued to all firms supervised by the Asset Management Supervision Directorate. The aim of the questionnaire was to gauge how prepared firms are for Brexit and the various outcomes that may occur. AMS completed an analysis of the responses and determined how firms addressed the requirements outlined in the letter. Furthermore, the level of impact/disruption that a "Hard" Brexit may have on a firm, risks identified by the firms, and the quality of their responses (including if firms outlined proposed steps to mitigate identified risks) was also analysed.

Following this analysis of the questionnaires, approximately 70% of responses were deemed to be of 'Basic' or 'Poor' quality with further engagement now expected to take place with these firms, to address any shortcomings.

Letters will be issued to all firms no later than 15 June 2018 outlining risks identified across their sectors and additional steps that are required to be taken.

4.3.4. Risks identified by firms arising from a hard-Brexit

There were common risks identified across the division by both MiFID and Fund Service Provider firms. For the Fund Service Provider entities, key risks noted were:

- The impact of losing the ability to Passport (marketing and distribution of UK funds into EU, and EU funds into UK) and,
- The loss of access to UK-based subsidiaries/counterparties (and the ensuing delegation /outsourcing concerns).

For the MiFID entities, key concerns identified included:

- The loss of access to the UK market and the macroeconomic effects (including exchange rate fluctuations and declining Irish GDP implications for their business models).

Common concerns to both populations of firms were the risk in losing key staff and raising staffing costs. GDPR could become an issue if the UK become a non-equivalent third country. Finally, conduct risk (investor protection implication) was also a recurring theme.

4.4. Securities and Markets Directorate (SMSD)

From a supervisory perspective, SMSD recently contributed to an ESMA survey on cliff effects for asset management. The survey focused on EU27-UK/ UK-EU27 cross-border activities in the asset management sector and the related contingency planning. [Omitted due to confidentiality].

SMSD have been actively involved in reviewing and assessing potential new firms and venues including Organised Trading Facilities (OTFs). There are no OTFs at present in Ireland, [Omitted due to confidentiality].

SMSD is a key stakeholder in this review process as MIFID II establishes new position reporting obligations for OTFs.

4.5. Market infrastructure

In relation to finding a central securities depository (CSD) solution to settle Irish securities (equities and ETFs) post Brexit, the Central Bank has continued its extensive engagement with the national stakeholders (Department of Finance (DoF) and NTMA) to outline the issue […] for consideration by the Financial Stability Group (FSG). [Omitted due to confidentiality].

In parallel, the Bank has met with representatives of the Irish Stock Exchange (ISE) to discuss and challenge the core principles for any CSD solution identified by the Irish User Committee (IUC). Further engagements with the issuers, registrars, brokers and CSD providers are planned […].

4.6. Retail intermediaries, electronic money institutions and payments institutions

The PI/EMI sector continues to grow given it is at the forefront of mobile/emerging technology developments. The growth in the pipeline of applicants seeking authorisation in Ireland to operate in the sector is being driven by Government focus on cultivating developments in this industry in Ireland and the result of the Brexit referendum in the UK. Moreover, the implementation of the revised Payment Services Directive (PSD2), which was transposed into Irish law with effect from 13 January 2018, is also increasing the pipeline of applications given it introduces new categories of PI that now require authorisation. The expanding pipeline of PI/EMI applications takes place at a time when the level of work required to assess every application has significantly increased following the transposition of PSD2. In terms of on-going stakeholder engagement on PSD2, CPSU will continue to seek opportunities to engage with other competent authorities to share experiences and industry trends. The pipeline of potential applicants that may seek authorisation in Ireland to operate in the RI sector is growing as the UK withdrawal date draws closer. CPSU will continue to monitor the level of applications received in this sector in the context of the impact on its ability to deliver on the Bank's statutory and public service commitments in respect of this sector.

5. Authorisations activity

[Omitted due to confidentiality].

6. Central Bank engagement on Brexit issues at a European level

6.1. European Banking Authority (EBA)

[Omitted due to confidentiality].

7. The EBA has surveyed NCAs on contingency planning by credit institutions in the EU in the case of a hard Brexit and is considering, in parallel with the other ESAs, to issue a communication/warning to firms on consumer protection and contingency planning in June 2018. It is proposed that this communication could address:

- Consumer Protection: Firms should ensure their customers are aware of their rights and the possible impact of Brexit on products and contracts.
- Readiness: Firms should assess all possible channels of contagion and activate their contingency plans to mitigate exposure to the identified risks stemming from a hard Brexit in a timely and proactive manner.
- Resolution: re the possibility of MREL liabilities issued under English law becoming ineligible in a hard Brexit scenario (including potential solutions to mitigate this risk, such as inclusion of contractual clauses for third country recognition of such UK law liabilities, or alternatively issuing the liabilities from the EU27).

[Omitted due to confidentiality].

7.1. European Insurance and Occupational Pensions Authority (EIOPA)

The EIOPA Brexit platform has developed two further draft opinions on the impact of the UK's withdrawal from the EU. The first opinion focusses on the risks for the solvency position of insurers and reinsurers as a result of Brexit. The second opinion is aimed at consumers and policyholders and is focussed on the information disclosure to customers on the impact of Brexit. The intention is that these two opinions would be published by EIOPA, once the drafting is agreed by the EIOPA BoS. [Omitted due to confidentiality].

The Brexit platform continues to discuss progress and updates of insurers' contingency plans and specific issues arising from these plans.

7.2. European Securities and Markets Authority (ESMA)

ESMA continues to progress its on-going Brexit workstreams including: ESMA's Brexit-Related Risk Analysis; the supervisory coordination network; impact of Brexit on ESMA's direct supervision work; and the operational impact on ESMA.

[Omitted due to confidentiality].

In addition, ESMA has conducted a survey of EU27 members in order to collect information on how NCAs are assessing investment firm's contingency plans. The results of the survey and possible actions by ESMA/NCAs are being considered.

[Omitted due to confidentiality].

The ESMA Supervisory Co-ordination Network continues to meet regularly to discuss cases of authorisation requests and issues of supervision/enforcement arising from investment firms, asset managers and trading venues seeking to relocate from the UK. [Omitted due to confidentiality].

7.3. ECB: Single Supervisory Mechanism (SSM)

[Omitted due to confidentiality].

7.4. ECB: Market Infrastructure and Payments Committee (MIPC)

[Omitted due to confidentiality].

7.5. ECB: International Relations Committee (IRC)

[Omitted due to confidentiality].

7. Special Topic 1: Macroeconomic modelling and Brexit[19]

7.1. Introduction

Staff within the Bank have been actively involved in Brexit related macroeconomic modelling work. Initially the work revolved around estimating impacts on Irish GDP via Vector Autoregressive (VAR) models and exchange rate pass through to consumer prices (documented in the September 2017 Brexit Task Force Report - Special Topic 1: Impact of Sterling Depreciation on Irish Consumer Prices). More recently work has centred around using the Bank's macro model COSMO (Core Structural Model of the Irish Economy) to simulate the impact on Ireland arising from a range of potential Brexit related scenarios and exchange rate shocks. In addition, a separate stream of work relating to non-tariff barriers (NTBs) has been undertaken following the Bank's roundtable on supply chain issues last year. This chapter summaries the macro modelling work with NTBs covered in the second following chapter. Much of this research has been or will be published in the short-term.

7.2. Macro modelling and COSMO

The COSMO model has been used extensively over the past year to estimate a range of Brexit related scenarios. These have ranged from exchange rate effects to broader macroeconomic shocks arising from Brexit. While there are a range of results, the overall numbers are not too dissimilar to previous Bank (and ESRI) related research in this area.

Box: COSMO – A Brief Overview[20]

COSMO is a detailed multisectoral structural model of the Irish economy. The behavioural equations are estimated econometrically. The model contains three sectors: traded, non-traded and government, with the sectors defined based on the input-output tables. The long-run equilibrium in the model is driven by the supply side. The supply block consists of a 3-factor normalised nested constant elasticity of substitution (CES) production function with labour augmenting technical progress. The estimation approach for each sector follows that of Barrell and Pain (1997). The short-run dynamics in the model are determined by the error correction system. The long-run equilibrium in the model, determined by optimisation, ensures that the variables in the model eventually converge on their long-run path as specified by theory. This is achieved through the price-wage system, whereby the prices of the factors of production adjust to guide the economy back to its long-run potential level when there are short run deviations.

[19] Special Topic refers to work carried out by the Irish Economic Analysis Division (IEA).

[20] COSMO was developed by the Central Bank of Ireland and the Economic and Social Research Institute (ESRI) as part of a joint modelling project that ran from 2013–15. The Central Bank of Ireland's version of the COSMO model – may contain some differences compared to the ESRI version (Bergin et al., 2017).

The model initially focusses on the output/production relationships after which the expenditure/income relationships are determined. Given the structure of the Irish economy, where the majority of goods and services output is exported and with overall exports amounting to over 100 per cent of GDP, the equation for traded sector output is a key mechanism in the model. Traded sector output is modelled as a function of world demand and competitiveness. Output in the non-traded sector is driven by domestic demand. On the labour market, wages are modelled in a bargaining framework that includes variables that affect both the supply and demand for labour. There is a long-run relationship for the producer wage and another for the consumer wage. Each of these represent either side of the bargaining process. From the producers' perspective, producer prices matter along with productivity. From the consumer perspective, consumer prices and the unemployment rate – representing the relative bargaining strength of workers – is included. Labour supply is modelled as a function of participation and migration. Migration has been a key channel influencing labour supply in Ireland over a long period. In COSMO, the emigration flow is modelled as a function of the relative attractiveness of alternative labour markets.

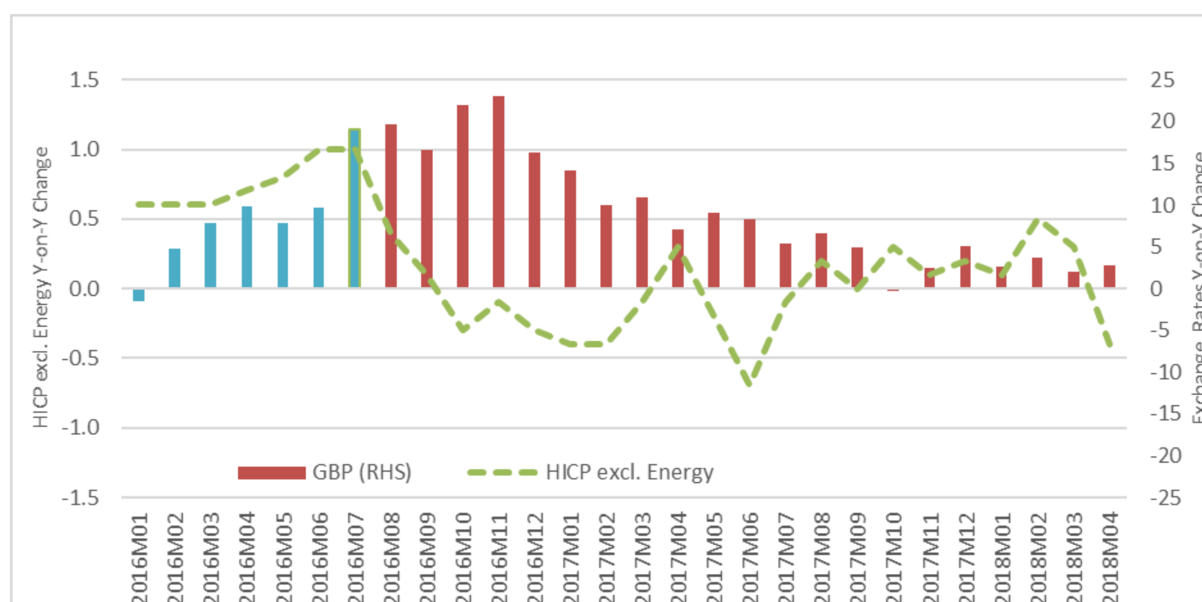
A new feature of the COSMO model is the inclusion of a banking sector based on McInerney (2016). The model consists of a series of supply and demand equations for different components of bank credit (mortgages, consumer credit, commercial property and non-property NFC loans) as well as housing and commercial property. In addition, impairments (arrears and insolvencies) are also modelled. The inclusion of a banking sector means that the model can capture the interaction between credit markets, macroprudential policy and the property market. The inclusion of real financial linkages is an important innovation in the COSMO model following the criticisms of macro models during the financial crisis.

7.2.1. Sterling Exchange Rate – Pass Through and Depreciation[21]

Since the Brexit referendum in June 2016, the value of sterling depreciated by 12 per cent relative to the euro (see Chart 7.2.1). In April, the euro averaged £0.87; this compares to an average value of £0.76 from 2001-2016. So far, this is the main channel through which Brexit has impacted the Irish economy.

[21] For more details, see Economic Letter Series Vol 2017, No. 8 Exchange Rate Pass-Through to Domestic Prices, by Paul Reddan and Jonathan Rice.

Chart 7.2.1: Inflation and €/£ Exchange Rate



7.2.2. Pass Through

In 2017 (Reddan and Rice), the Bank published work (using a Vector Autoregressive Model (VAR)) that highlighted a considerable pass through from the sterling exchange rate to Irish consumer prices. This reflected the disproportionally large share of UK manufactured and food related products in the Irish consumption basket. This work was documented in the September 2017 Brexit Task Force Report (op cit.,)The weakness in sterling/euro exchange rate over the past two years has acted as a drag on consumer prices in Ireland.

7.2.3. Sterling Depreciation[22]

To quantify the impact of a sterling depreciation, a scenario was modelled involving a 10% permanent fall in the value of sterling relative to the euro. To perform this analysis, IEA used two structural econometric models - COSMO (for Ireland) and NiGEM (National Institute Global Econometric Model for the UK and the World).[23] A two-step approach was taken. First, NiGEM was simulated to capture all of the changes to the international environment due to the shock. This includes the effect on the UK economy (such as GDP, volume of imports, price of exports, etc.) and, for completeness, the effect on Ireland's other main trading partners. Second, all of these external effects were then brought together and used as inputs in the COSMO model to measure the impact on Ireland.

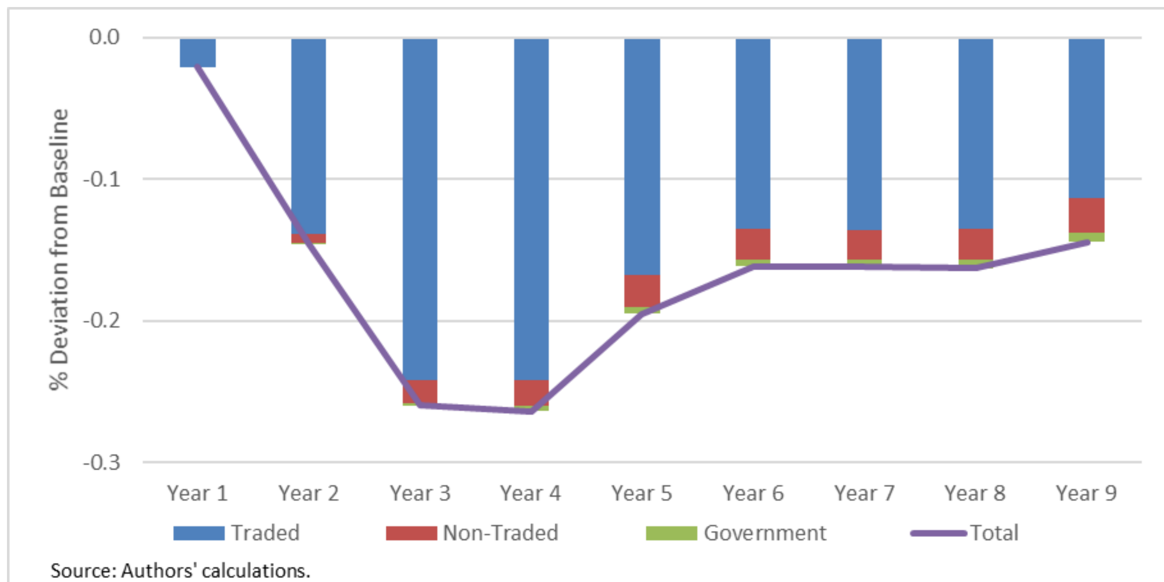
[22] Taken from Quarterly Bulletin 2 2018, Box B: Sterling Deprecation, by Thomas Conefrey and Graeme Walsh.
[23] NiGEM is the macro model of the National Institute for Economic and Social Research (NIESR) in the UK.

To isolate the effect of the depreciation, the responses of key macroeconomic aggregates in the shock scenario (i.e. with a permanent 10 per cent sterling depreciation) were compared to a no-change baseline. The two most important channels through which a depreciation affects the Irish economy (in COSMO) are via a competitiveness effect and the impact on foreign demand for Irish exports. A third mechanism is the pass-through effect to consumer prices.

1. A sterling depreciation would improve the relative competitive position of UK exporters and, consequently, has a negative effect on the traded sector in Ireland (i.e. becomes less price competitive).
2. In terms of the impact on foreign demand for Irish exports, two offsetting effects arise. The increase in UK exports and GDP stimulates the demand for Irish exports, but because it would become more expensive for the UK to import from abroad, UK imports and the demand for Irish exports would be lower.
3. The depreciation of sterling would reduce Irish import prices, which would feed through to lower consumer prices. The effect on consumer prices would be more gradual and partial than the decline in import prices.

Chart 7.2.2 shows the effect of the sterling depreciation on Irish output by broad sector. The traded sector accounts for most of the impact, with the level of output about 0.4 per cent lower after 3-4 years before falling back to 0.2 per cent lower in the long run. The decline in traded sector output is driven by the deterioration in Ireland's relative competitive position. The reduction in traded sector output affects other areas of the economy with investment and traded sector output lower thereby also reducing employment, wages and consumption. Due in part to the relatively small effect of the shock on the non-traded sector, the aggregate impact on the level of GDP is just under -0.2 per cent in the long run. In terms of inflation, the fall in import prices would result in the level of consumer prices being around 0.3 per cent lower in the short run. The fall in prices would help to moderate the decline in real incomes and consumption as a result of the shock.

Chart 7.2.2: Effect of Sterling Depreciation on Output,% change from Baseline



Source: Authors' calculations.

It is also helpful to compare the realised outturns for several macroeconomic aggregates in recent months with outcomes suggested by the model given the fall in the value of sterling. Since 2016, Irish inflation has been weak with HICP inflation measuring -0.2 per cent and 0.3 per cent in 2016 and 2017 respectively. These rates are lower than in the rest of the euro area. Reddan and Rice (op. cit.,) show that sterling weakness is a significant contributory factor to the weak inflationary trend evident in recent years. For exports, a comparison of the model predictions to the actual outturn for exports presents a more complex picture. In 2016, the value of overall goods exports increased by 6.1 per cent, but within this exports to the UK fell by 3.1 per cent, consistent with the simulation results. The decline in exports occurred in sectors such as food and meat, which have a particular exposure to the UK market. In 2017, the value of Irish exports to the UK increased by 8.2 per cent, despite the continued weakness of sterling. This suggests that while Irish firm's exports to the UK were negatively impacted by the large initial depreciation of sterling in 2016, exports were somewhat less affected by the subsequent smaller depreciation in 2017.

7.2.4. Broader Brexit Related Macroeconomic Shock[24]

A range of broader Brexit related shocks have been modelled using COSMO as part of ongoing research work [...].

These shocks are modelled as a two-stage process: first the NiGEM model is used to estimate the impact on Ireland's key trading partners and the broader international environment. This allows us to quantify the effect of external shocks on key exogenous variables for the Irish economy such as trading-partner demand, exchange rates and interest rates. Second the outputs from these scenarios area used as inputs in COSMO to assess the overall impact on Ireland. This builds on previous research for Ireland by Bergin et al. (2013) and Bergin et al. (2016), extending this work by considering new shocks and building in the two-stage modelling approach described above. The work is also complementary to O'Grady et al (2017) who use a GVAR framework to investigate a similar set of shocks to the Irish economy, including shocks to interest rates and exchange rates.

In short, the modelling approach involved developing a baseline scenario for Ireland out to 2030 taking a no-Brexit scenario from NIGEM. Then, a variable or range of variables can be shocked and used as exogenous inputs in COSMO (e.g. alternative paths for foreign demand, exchange rates, etc.), with the model then solved and compared to the baseline. In general, long-run deviations are examined – that is changes over a 10-year horizon.

7.3. Modelling the implications of a hard Brexit

Given the openness of the Irish economy, assumptions on external demand are a key input into any forecast or modelling exercise. These assumptions in turn are critically dependent on the forecasts for growth in Ireland's three key trading partners: the US, UK and Euro Area. In the case of the UK, there is a risk that a hard Brexit could reduce growth and hence UK demand for Irish exports, as well as having a broader impact on output in the Euro Area and the US. With the UK being Ireland's single largest trading partner, Brexit has the potential to have a significant effect on the Irish economy. Just under 13 per cent of Irish goods exports and 16 per cent of services are sold into the UK market. Around 16 per cent of Irish imports come from the UK. For specific sectors, such as the employment intensive agriculture and food sector, the dependence on the UK market is even larger than suggested by these aggregate

[24] Taken from "Modelling External Shocks in a Small Open Economy: The Case of Ireland", by Thomas Conefrey, Gerard O'Reilly and Graeme Walsh, National Institute Economic Review No, 244 May 2018.

figures (Donnellan and Hanrahan, 2016). Around 40 per cent of Irish agri-food exports are destined for the UK market (Department of Agriculture, 2017).

To model the impact of Brexit scenarios, NiGEM was used to examine the impact of a hard Brexit on the UK. This involved considering four shocks impacting the UK: reductions in trade with EU member countries, an increase in tariffs, a reduction in inward FDI flows and the repatriation of the UK's projected net contributions to the EU budget. The shocks were quantified based on existing academic evidence. In addition, additional uncertainty effects were factored in that persist until the end of 2020. These are also assumed to effect Irish firms so that business investment in Ireland is reduced by an equivalent amount as in the UK.

In a scenario where the UK exits the EU and enters a WTO environment, tariff barriers would rise on EU-UK trade. Ebell et al. (2016) incorporate the impact of tariffs of EU-UK trade by shocking UK export prices to the EU and EU export prices to the UK from the third quarter of 2018 (corresponding to the end of the Article 50 negotiating period). This shock was increased from 5 per cent to 9 per cent to match the size of the average WTO most favoured- nation (MFN) import tariff.

Taking all of the shocks together, UK GDP is projected to be around 3.5 per cent lower in the long run than in the baseline case (where the UK remains in the EU). This is driven predominantly via the trade channel and a marked fall in UK trade with the EU. There would also be a further depreciation of sterling versus the euro. GDP in Ireland's other main trading partners – the Euro Area and US would also be reduced but by a smaller amount than the reduction in UK output.

These results are then fed into the COSMO model to assess the impact on Ireland. The main channel comes via a fall in the level of external demand for Irish exports with the results summarised in Table 7.3.1. Irish output would be reduced by around 3.2 per cent after ten years, with most of the impact occurring in the traded sector following a fall in demand for Irish exports (mainly from the UK), along with the deterioration in Ireland's relative competitiveness caused by the depreciation of sterling.

Table 7.3.1: COSMO simulations from a Brexit shock

		Units	**Year 3**	**Year 5**	**Year 10**
Output					
	Total	%	-1.7	-2.8	-3.2
	Traded	%	-2.2	-3.3	-3.7

	Non-traded	%	-1.7	-2.9	-3.0
Domestic demand					
	Consumption	%	-0.8	-2.0	-2.9
	Investment	%	-7.3	-9.6	-5.5
Trade volumes					
	Exports	%	-2.3	-3.6	-4.2
	Imports	%	-3.2	-4.5	-4.0
Labour market					
	Unemployment rate	p.p.	0.5	0.9	0.9
	Employment	%	-1.0	-2.0	-2.4
	Wages	%	-0.2	-0.4	-1.0
Government					
	Debt (% of GDP)	p.p.	2.4	5.1	7.8

The reduction in output and the resulting decline in firm profitability also leads to a fall in investment and output in the non-traded sector. Economy wide job losses would be significant with employment down by close to 2.5 per cent in the long run and with the unemployment rate almost 1 percentage point higher. These effects in turn would lower household incomes and consumer spending with the latter 3 per cent lower after 10 years. Finally, there are also potential fiscal implications arising from automatic stabiliser channels that would increase government deficit and debt levels by the end of the period.

In summary, the scenario illustrates the potential negative impact of a hard Brexit on the Irish economy. Output and employment are both significantly lower following the shock. The estimates of the long-run impact are broadly in line with previous work by the Bank (in 2016) and those of Bergin et al. (2017). That said, these scenarios are highly stylised (and partial) and uncertain as the models only capture some of the likely consequences for key variables such as trade, investment and productivity. For example, no assumptions were made in relation to foreign direct investment (and potential positive spillovers for Ireland – see Bergin et al., 2016).

8. Special Topic 2: Non-tariff barriers to trade[25]

There has been much analysis of the potential impact of Brexit on trade flows between the UK and the rest of the European Union (EU). In trade terms, membership of the EU confers two primary benefits: there are no tariffs or customs duties, and there are EU-wide agreements on product standards, rules of origin, customs inspections and documentary compliance. These agreements reduce non-tariff barriers (NTBs) between EU countries.

Much of the debate on the trade impact to date has focused on the impact of tariffs, whereas the impact of increases in NTBs has received less attention. The latter are likely to be particularly important in the context of the UK's exit from the single market and the customs union. While an agreement may be made to avoid the imposition of tariffs, any form of "regulatory divergence" would necessitate NTBs to some extent.

In a recent paper, IEA researchers document the effects of an increase in NTBs following the UK's exit from the single market and customs union on Irish-UK goods trade.[26]

Ireland is particularly reliant on trade with the UK in areas such as agriculture, for exports and manufacturing goods, for imports. Recently, there has been a shift toward more high value added sectors such as technology and pharmaceuticals (Byrne and O'Brien, 2015). While there are obvious historical reasons for close UK and Irish trade relations, joint membership of the European Single Market and customs union have enabled frictionless trade between the two islands since 1973.

Using data from the World Bank's *Doing Business* survey, the paper examines the impact of increases in two NTBs that are likely to be prevalent after the UK leaves the EU, border waiting times and documentary compliance. IEA research has shown that:

- The potential increase in non-tariff barriers (in the form of additional customs procedures and documentary compliance) is associated with a 9.6 per cent decline in total trade between Ireland and the UK.
- This equates to a 1.4 per cent decline in total Irish exports and a 3.1 per cent decline in total Irish imports under the current composition of trade between the two countries.
- Fresh foods, raw materials (such as metals and some intermediate inputs into firms' supply chains) and bulky goods are most exposed to delays.
- Trade in petrol and other fuels, and chemicals and related goods are least exposed.

[25] Authors: Stephen Byrne and Jonathan Rice.
[26] See 'Non-Tariff Barriers and Goods Trade: a Brexit Impact Analysis', by Stephen Byrne and Jonathan Rice, Research Technical Paper Vol. 2018, No. 7.

Chart 8.1: Goods Level Losses in Irish Imports Exports to the UK

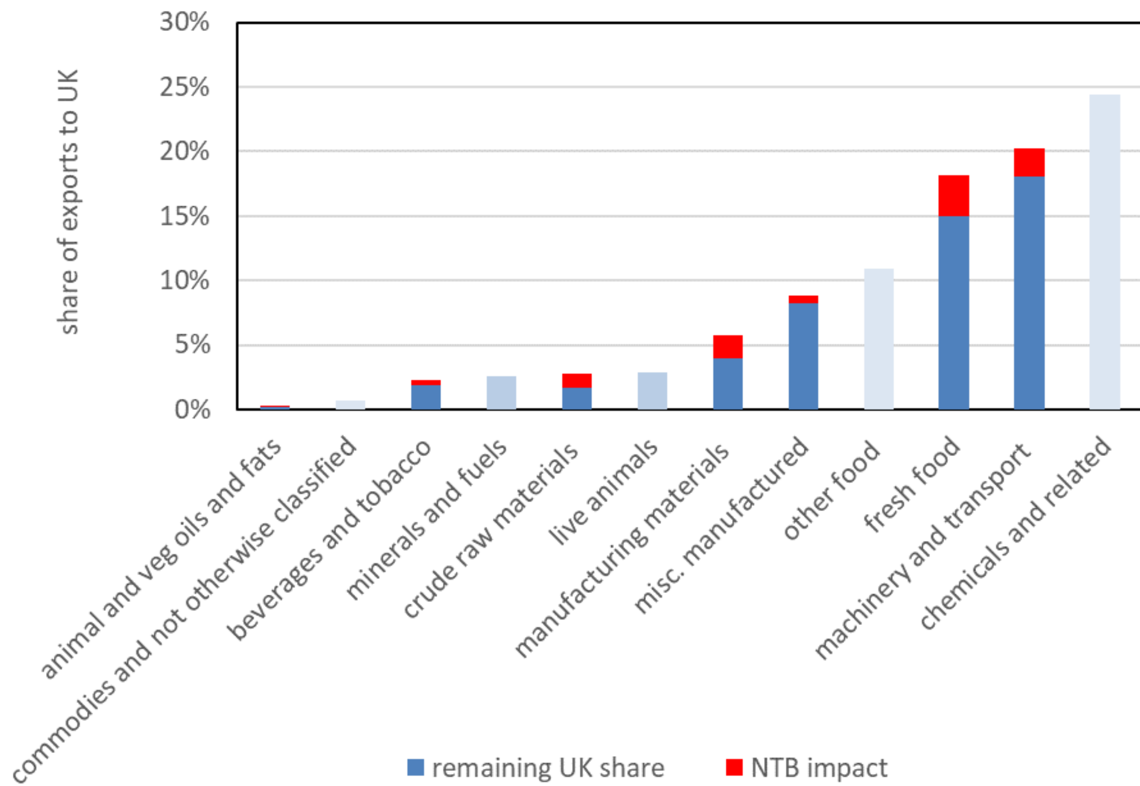
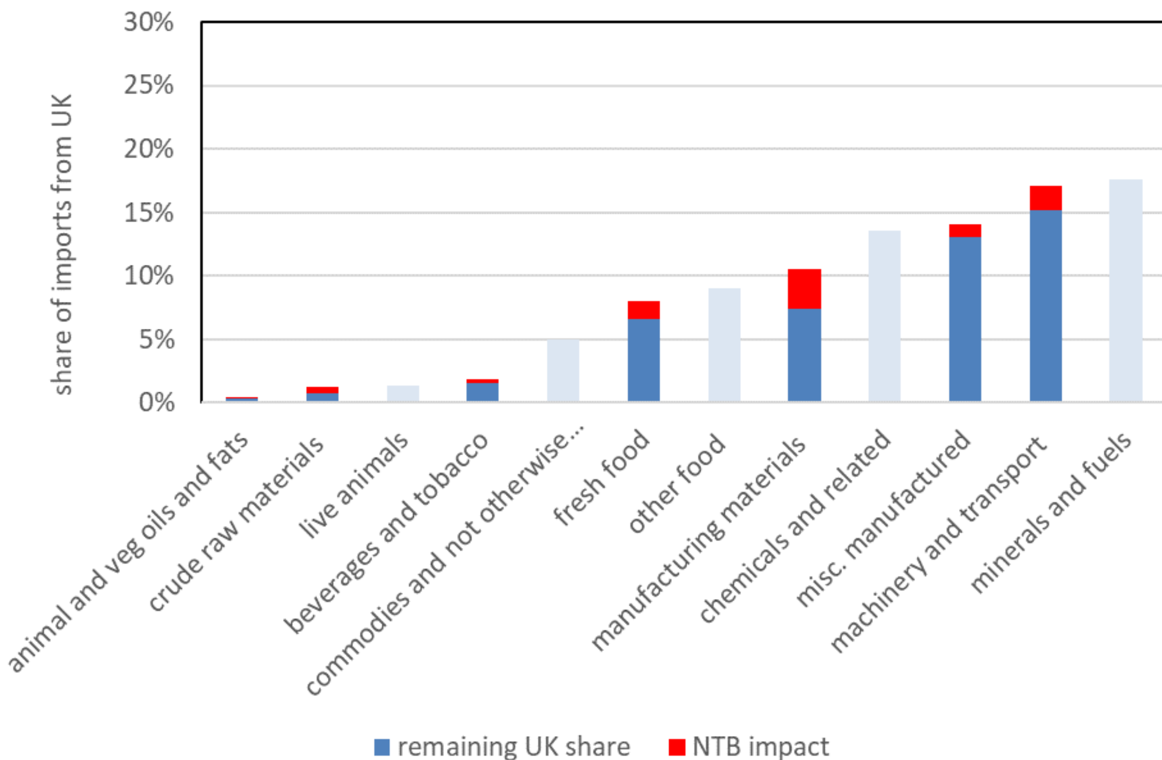


Chart 8.2: Goods Level Losses in Irish Imports from the UK



The paper's estimate of the decline in Irish trade with the UK may not translate into a decline in total Irish trade with the rest of the world. The issue of import and export substitution is an important one, which is beyond the scope of this paper. In the extreme case, all of the estimated decline in trade with the UK could simply be redirected elsewhere.

There are several reasons to think this may not be the case however. Irish-UK trade is driven by various factors over and above shared membership of the EU such as a common language, similar legal systems previous colonial relationship as well as proximity. There is no other country (or even group of countries) which fulfil these characteristics.

9. Special Topic 3: EU Migration to and from the UK in the context of Brexit[27]

9.1. Overview

This Special Topic note examines data on the size and significance of EU 27 citizens' migration flows to and from the UK, as well as possible regional and sectoral impacts.

EU nationals make up a sizeable proportion of the UK population with a higher concentration in the London region and in certain sectors. There is some evidence of a mismatch between skills and occupations linked to origin within the EU.

It is too soon to say whether there is a distinct "Brexit effect" behind recent changes in migration flows, but there has been a significant and consistent decline in EU migration to the UK and an acceleration of emigration of EU citizens out of the UK as well as an increase in EU citizens acquiring UK citizenship. With a special focus on migration flows between Ireland and the UK, we see significant changes to the Irish migratory patterns vis-à-vis the UK.

[Omitted due to confidentiality].

9.2. Introduction

Citizens' rights – those of EU nationals in the United Kingdom and UK nationals in the European Union – have been one of the main negotiation topics since the 2016 Brexit referendum. The Phase 1 agreement reached in December 2017 and the legal text published by the European Commission in February 2018 achieved preliminary agreement – at least on the portion concerning citizens' rights – with the EU27, including the United Kingdom, in March 2018[28]. Key elements of the draft citizens' rights deal include the right of current residents, regardless of arrival date, to stay in the UK; continued access to social security benefits, including pensions and health care; and extended rights with respect to family unification. However, progress at the negotiating table has not yet prompted the UK government to clarify its migration rules for EU citizens.

9.3. Stock of EU citizens who live in the UK

The number of EU citizens living in the UK has increased significantly since 2012. The UK reported the second largest total number of immigrants in 2017 across EU

[27] Authors: Mary Keeney (IR) and Silvia Calò (IR)
[28] https://ec.europa.eu/commission/sites/beta-political/files/draft_agreement_coloured.pdf

countries.[29] The Office for National Statistics (ONS) estimates that by 2016, 9.4 million people living in the UK were born abroad, and accounted for around 14 percent of the total population of the UK. Of these, 3.6 million were from EU24[30] and 5.8 million were from non-EU countries. The number of Polish nationals reached 1 million in 2016 and increased by 20,000 people by the end of 2017, followed by an estimated 411,000 Romanians and 350,000 Irish nationals.[31] Up until 2014, transitional controls were in place between Romania and Bulgaria, and the UK.

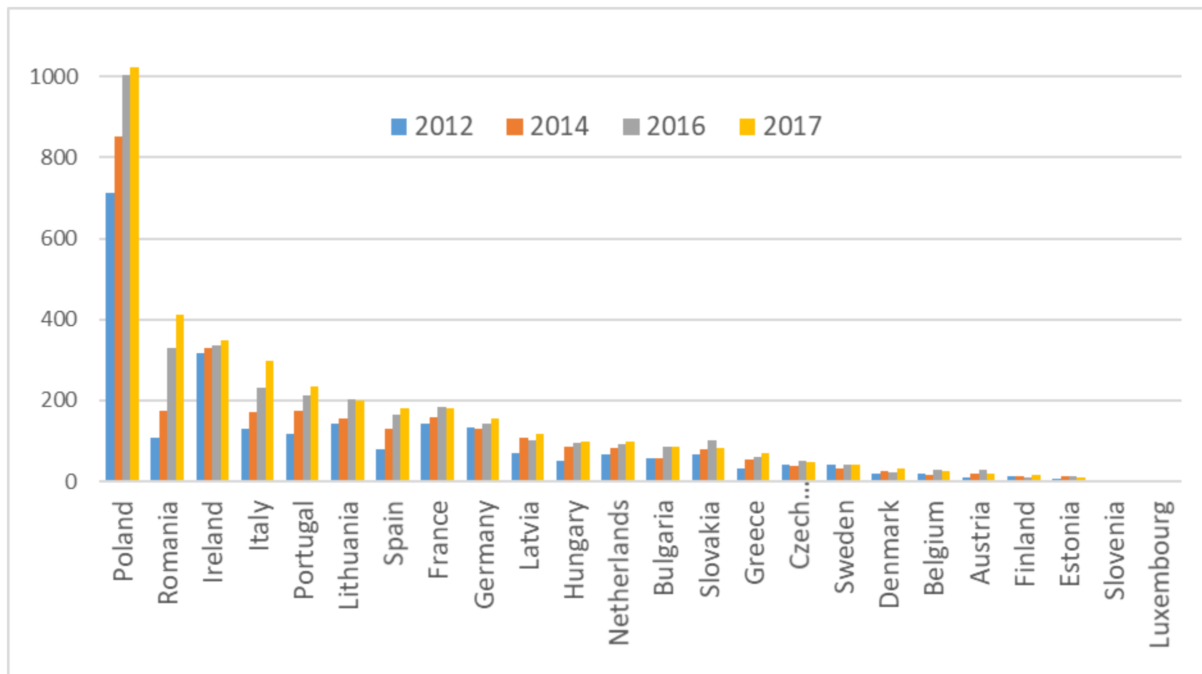
Overall, by the end of 2017 the three most common non-British nationalities in the UK were Polish, Romanian and Irish (Chart 9.3.1).

[29] http://ec.europa.eu/eurostat/statistics-explained/index.php/Migration_and_migrant_population_statistics

[30] *EU14* countries include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and Sweden. *EU8*: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia. *EU2*: Bulgaria and Romania. *Other EU*: Cyprus, Croatia and Malta. *EU24*: EU14 plus EU8, plus EU2. *EU13*: EU8, plus EU2, plus Other EU. *EU15*: EU14 plus UK.

[31] These figures are not certain: they are based on a survey of households. Hence there is a margin for error for the figure for each nationality. Polish and Irish citizens are clearly the most numerous, but further down the list, the 'rank order' of nationalities is not reliable.

Chart 9.3.1: Resident EU population of the UK by nationality (thousands)



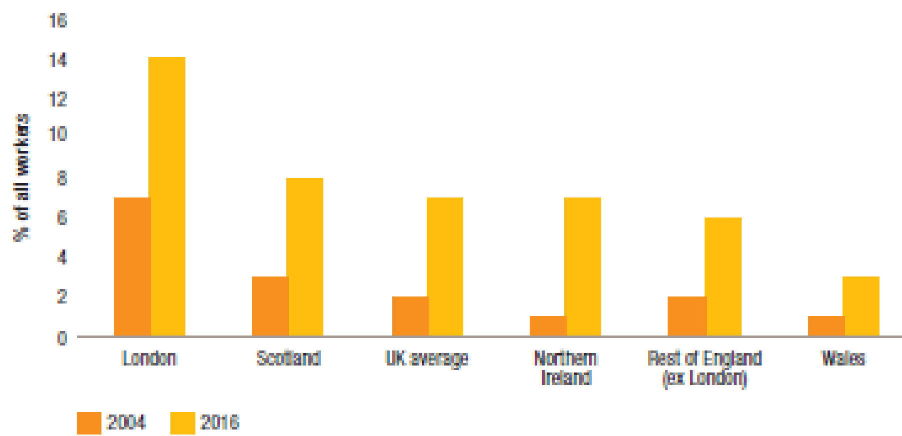
Source: ONS

Regional dimension

There are marked differences between regions in the share of workers born in the European Economic Area (EEA) (Chart 9.3.2).[32] London has more than twice the proportion of EEA-born workers (14% vs the UK average of 7% in 2016). While this has doubled since 2004, some other regions have seen even greater proportional increases. Wales continues to rely the least on EEA-born workers.

[32] https://www.pwc.co.uk/economic-services/ukeo/ukeo-nov17-full-report.pdf

Chart 9.3.2: Share of EEA-born workers by region

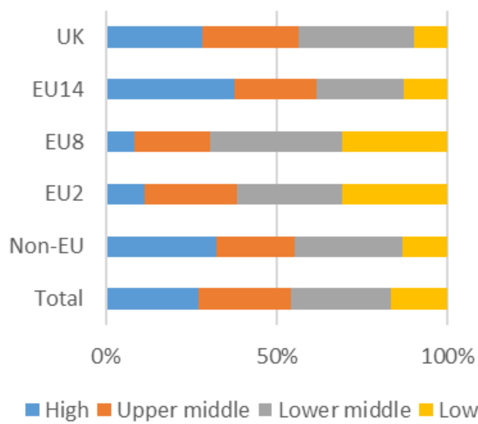


Source: ONS Labour Force Surveys, PwC.

9.3.1. Skills, mismatch and sectoral mix

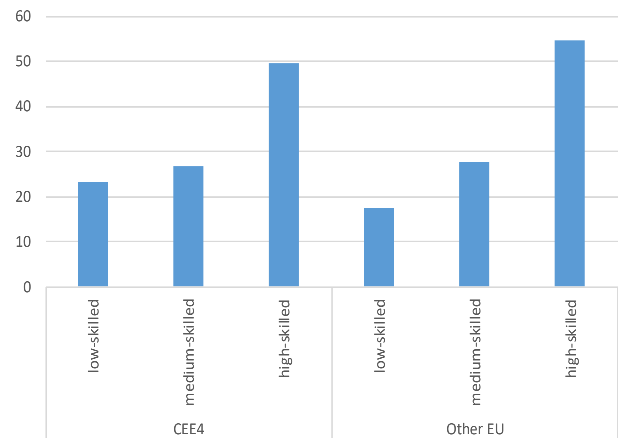
EU-born workers tend to be in lower skilled occupations compared with UK-born workers (Chart 9.3.1). This largely reflects the position of EU workers from Eastern and Central European EU8 and EU2 countries. However, this does not indicate lower average skill levels for EU8 and EU2 (EU10) workers, but is rather evidence of mismatch between skills and occupations (Chart 9.3.3). In essence, workers from EU10 countries tend to be overqualified for the positions they occupy.

Chart 9.3.2 Distribution of Workers in Each Nationality Group by Skill Level of Occupation (2016)



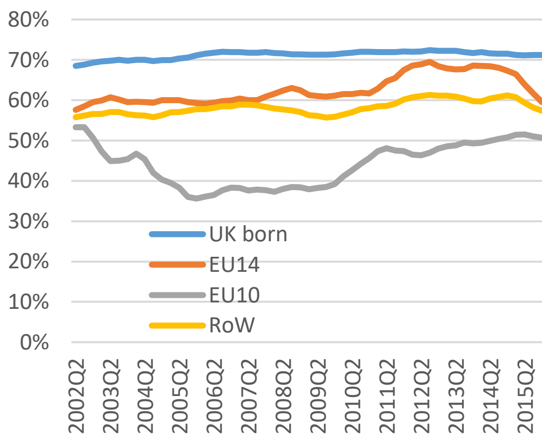
Source: ONS, Annual Population Survey (2017).

Chart 9.3.3 Skill Composition of Foreign-born Immigrants in the UK (%, 2010/2011)



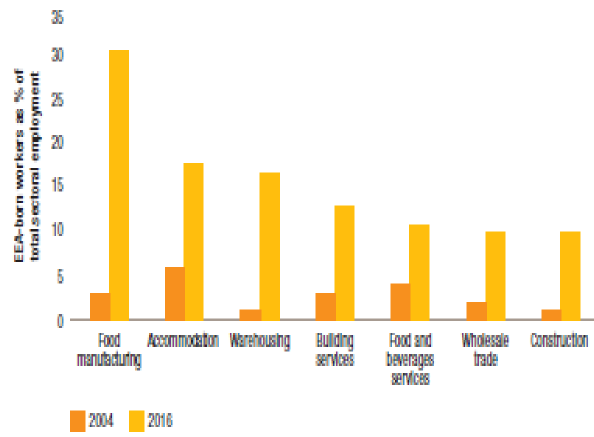
Note: CEE4 is BG, HU, PL, RO.
Source; OECD

Chart 9.3.4 Percentage of Those in Employment Defined as "Matched", by Country of Birth



Source: ONS - Labour Force Survey

Chart 9.3.5 UK Industry Sectors with Highest Reliance on EEA-born workers



As shown in Chart 9.3.4, some sectors have become heavily reliant on EU workers since 2004. In food manufacturing, almost a third of the workforce in 2016 was EEA-born, while it was around 10-20 percent for other sectors such as accommodation and building services.

9.4. Stock of EU citizens who live in the UK

The ready availability of EEA based labour has played an important part in the UK's economy. With Brexit, shortages in low skilled occupations and in the aforementioned labour intensive sectors could arise (MAC, 2018). This may be particularly true if EU workers were to face the same legislation recently introduced for non-EU workers. [33]

The Bank of England Agents' summary for May 2018 credits higher economy-wide pay increases, in part, to higher awards targeted at retaining staff with 'key skills' in light of concerns over availability of migrant workers. Limitations on recruiting higher-skilled workers after Brexit could have particularly negative implications for longer-term UK productivity and international competitiveness and long-term losses in GDP (Portes and Forte, 2017).[34] Professional organisations have underlined how the functioning of their field of speciality is highly dependent on immigrant workers and the challenges arising from a Brexit-related increase in the demand for their skills, e.g. due to sanitary and phytosanitary controls.

[33] Some jobs might not be eligible for work permits if the current non-EEA Tier 2 system (for certain higher-skilled sectors) was extended to EEA migrations and they were not classified as sufficiently skilled (MAC, 2018). Moreover in the case of non-EU nationals, the introduction of the skills levy in April 2017 has meant businesses are more reluctant to sponsor skilled workers from outside of the UK/EU given the significant costs involved.

[34] Portes and Forte (2017): http://voxeu.org/article/economic-impact-brexit-induced-reductions-migration-uk

9.5. Changes in migration flows to and from the UK

There was a significant drop in net migration to the UK in the quarter immediately following the Brexit referendum result (Q3 2016), when EU migration accounted for more than half of the net migration change. The breakdown shows that emigration out of the UK by EU citizens continued its mild upward trend, which started back in 2015, but immigration into the UK dropped off significantly only in early 2017 (non-seasonally adjusted data) (9.5.1).

Chart 9.5.1 Inflow (Immigration) of EU Citizens to the UK

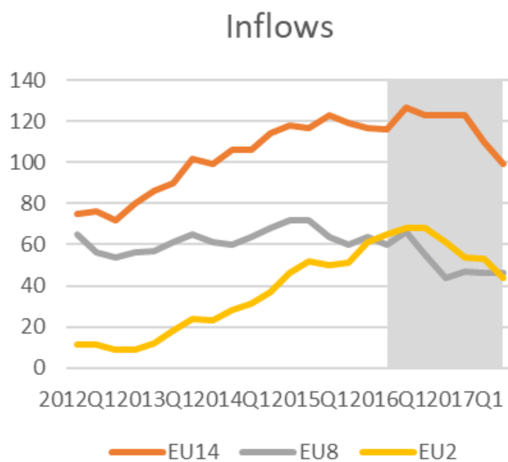
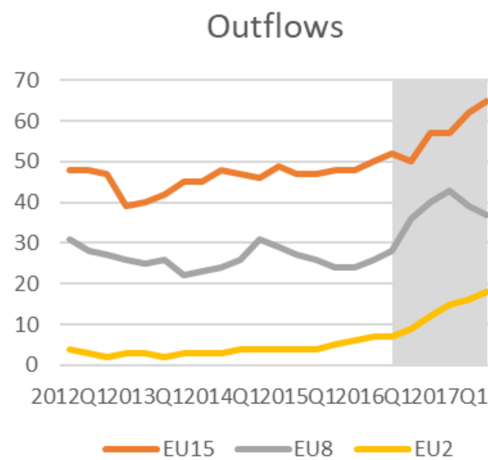


Chart 9.5.2 Outflow (Emigration) of EU Citizens to the UK



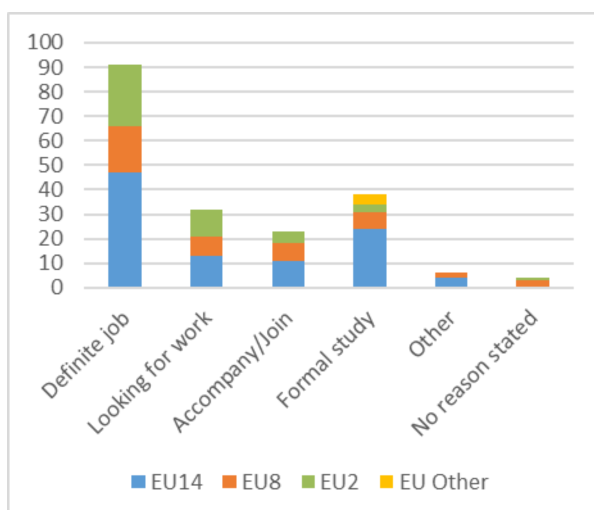
Source: NSO International Passenger Survey (IPS) estimates of long-term international migration. Rolling annual data for the United Kingdom, year ending September 2017. Shaded area indicates post-Brexit referendum period. Data ends in Q3 2017 since on 17 May 2018 the NSO announced a delayed release of the 2017 Q4 statistics. They will be released on July 16, 2018.

Reasons for changes in migration

The early post-referendum loss of labour was associated with the swift devaluation of the pound sterling. Workers regularly sending remittances to the rest of the EU saw a decline in the value of their earnings of around 10 percent. Many seasonal workers are highly flexible and move around the EU with the seasons without ties to any particular sector or employer. For resident labour, the decision about whether to stay is probably heavily influenced by the political climate and the discussions about their residency status post-Brexit (LSE Brexit Blog, May 2018).

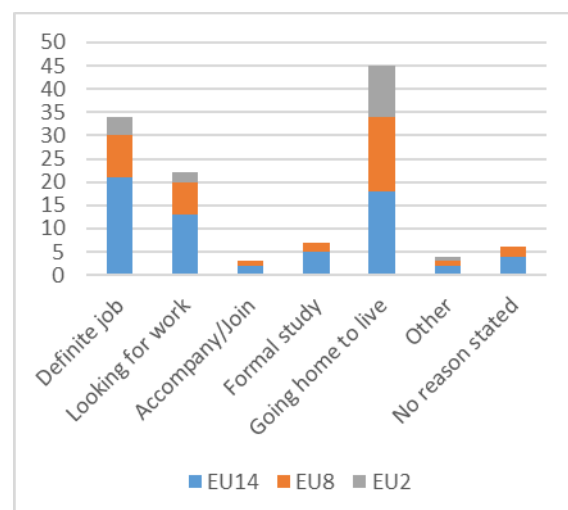
According to the International Passenger Survey (IPS) the reasons EU citizens gave for migrating to and from the UK include 'definite job', 'looking for work', 'accompany or join', 'formal study', 'going home to live', 'other', and 'no reason stated', as shown by Chart 9.5.3 and Chart 9.5.4. International migration for a 'definite job' was the most common reason for moving to the UK, while 'going home to live' was the most common reason for leaving the UK.

Chart 9.5.3 Reason EU Citizens' Immigration to the UK (Thousands)



Source: ONS (2018), LTIM provisional estimates Sept. 2017

Chart 9.5.4 : Reason EU Citizens' Emigration from the UK (Thousands)

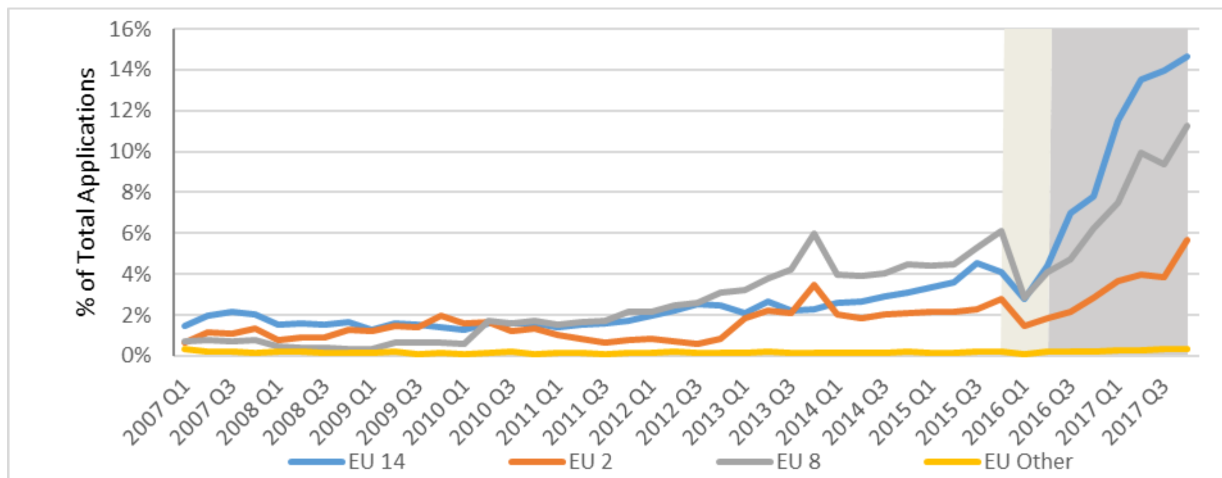


Source: ONS (2018), LTIM provisional estimates Sept. 2017. Observations for 'EU Other' are all omitted due to the small sample size.

When work-related reasons are grouped together, regardless of whether a person has a definite job in the destination country or will be looking for one, they remain the major factor guiding individual decisions. Based on this, the number of EU citizens coming to the UK for work-related reasons has fallen over the last year, in particular those going to the UK "looking for work". However, whether Brexit was the main underlying motivating factor has yet to be established.

As an alternative to emigration, some EU nationals might have looked at acquiring UK citizenship. The number of applications for UK citizenships made by EU nationals initially decreased in the first quarter of 2016 (the referendum date was set in February 2016), but since recovered considerably (Chart 9.5.5.). The pick-up in applications was particularly strong among EU14 citizens.

Chart 9.5.5 Citizenship Applications by Country of Nationality



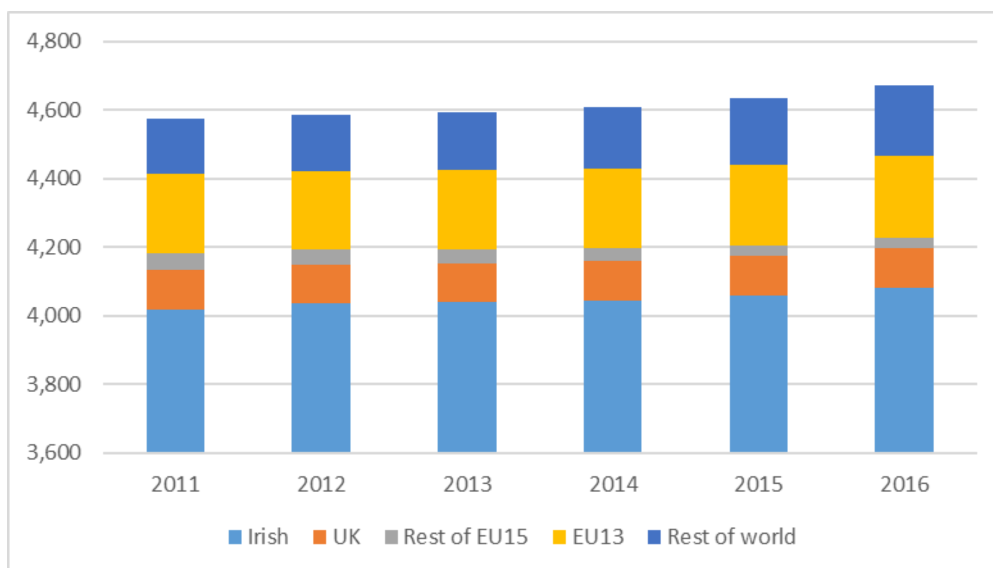
Source: ONS Citizenship tables - cz_01 to cz_10 (Feb. 2018) Note: Shaded areas indicate pre and post-Brexit referendum period.

9.6. UK-Ireland migration

The UK shares its only land border with Ireland, and it has historically been an important destination for Irish migration. Moreover, under Irish law, many UK citizens qualify for an Irish passport. Of 4.6 million residents in Ireland in 2016, 87 percent were Irish nationals, UK national accounted for 2 percent of the population (117,000 people), while the rest of the EU was 6 percent (Chart 9.6.1).

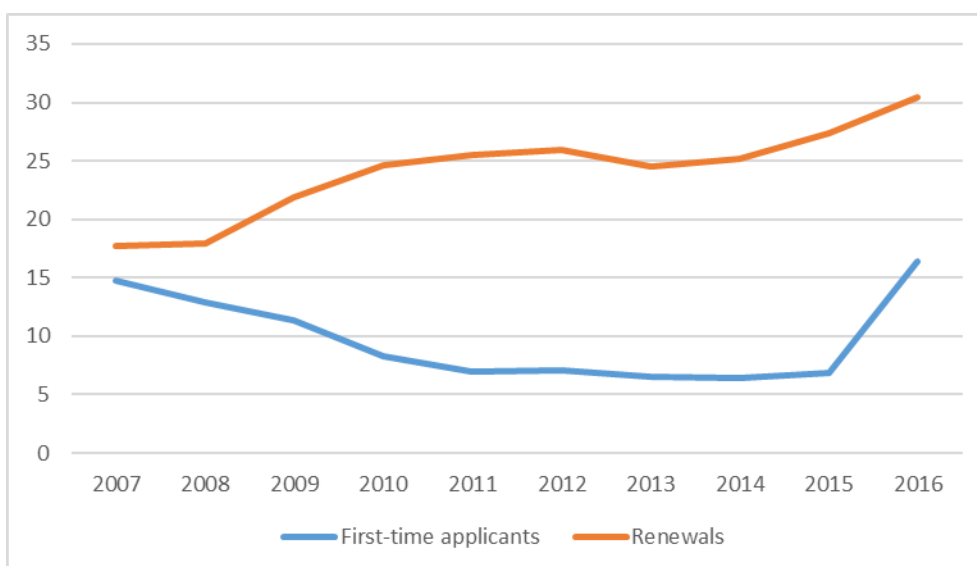
After the Brexit referendum, many UK-born citizens applied for an Irish passport. The increase in issuances is already visible in the data for 2016 (Chart 9.6.2).

Chart 9.6.1 Irish Population by Nationality (Thousands)



Source: CSO Estimated Population classified by Sex and Nationality, 2011-2016 (PME2016TBL9),:

Chart 9.6.2 Number of Irish Passports Issued to UK-born (Thousands)



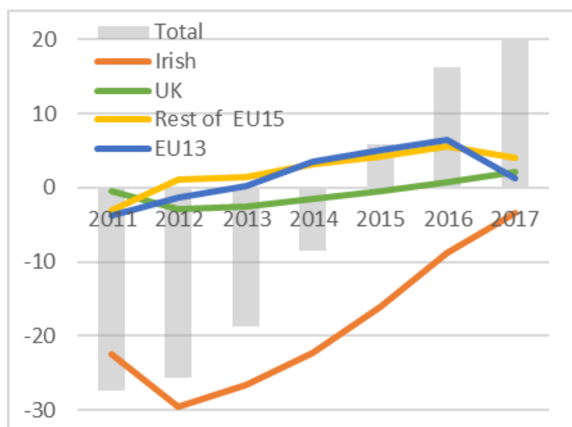
Source: Department of Foreign Affairs and Trade

While a breakdown of these figures is not available yet for 2017, the number of passport applications from Great Britain has increased by 28 percent that year, and the increase from Northern Ireland was 20 percent for a total of 80,752 and 82,274 applications respectively. The total of UK applications for Irish passports in 2017 represented 139% the stock of UK nationals living in Ireland. It is reasonable to think that some applications for Irish passports reflected a demand for EU passport, rather than a potential for higher immigration into Ireland.

Net migration into Ireland changed sign between 2014 and 2015, with more people entering the country than leaving (Figure 9.6.3). While these figures should be read in the context of the better performance of the Irish economy during that time period, the UK experienced a bigger decrease as a destination country since 2015 than the EU (Chart 9.6.4). Between 2016 and 2017, net emigration of Irish nationals decreased by 39 percent, while net immigration of UK nationals to Ireland registered an increase of 300 percent, from 700 to 2,100 people. While net immigration from the rest of EU 15 and EU 13 increased, the number of EU immigrants arriving in Ireland in 2017 decreased compared to 2016.

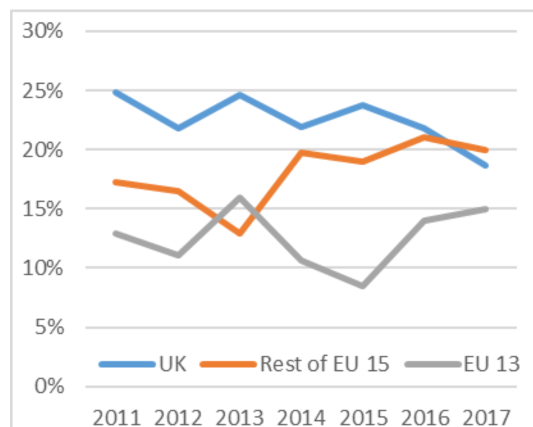
Even if these data are provisional and the time serie since the referendum short, there is little evidence of a substantial increase in EU citizens moving to Ireland rather than the UK.

Chart 9.6.3 Net Migration to Ireland by Nationality (Thousands)



Source: CSO, Estimated Migration classified by Sex and Nationality, 2011-2017 (PME2017TBL2)

Chart 9.6.4 Emigrants from Ireland by Destination Country (% of Total Emigration)



Source: CSO, Estimated Migration classified by Sex and Country of Origin/Destination, 2011-2017 (PME2017TBL3)

9.7. Comparing Brexit scenarios

[Omitted due to confidentiality].

9.8. Outlook

[Omitted due to confidentiality].

9.9. References

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ONS (2018), "Migration Statistics Quarterly Report: February 2018" (link)

Portes, J., & Forte, G. (2017). The economic impact of Brexit-induced reductions in migration. *Oxford Review of Economic Policy*, *33*(suppl_1), S31-S44.

RIBA (2018) 'Global by Design 2018: The RIBA's recommendations for a Brexit that works for UK architecture' (link)

RCVS (2017) 'European veterinary surgeons working in the UK: The impact of Brexit' (link)

Glossary

AIFM	Alternative Investment Fund Manager
AMSD	Asset Management Supervision Division
BISC	Brexit Insurance Supervisory Coordination Group
BMPE	Broad Macroeconomic Projection Exercise
BoE	Bank of England
BTF	Brexit Task Force
BSD	Banking Supervision Division
CA	Competent Authority
CCP	Central Counterparty Clearing House

Central counterparty clearing, also referred to as a central counterparty (CCP), is a financial institution that takes on counterparty credit risk between parties to a transaction and provides clearing and settlement services for trades in foreign exchange, securities, options and derivative contracts.

CETA	Bilateral Free Trade Agreement between EU and Canada
CET1	Core Equity Tier 1 Capital
CGE	Computable General Equilibrium Model
COSMO	Core Structural Model of the Irish Economy
CPD	Consumer Protection Directorate
CRE	Commercial Real Estate
CPD	Consumer Protection Directorate
CPI	Consumer Price Index
CPSU	Consumer Protection Supervision Division
CSD	Central Securities Depository
CSO	Central Statistics Office
DoF	Department of Finance
EBA	European Banking Authority
ECB	European Central Bank
EEA	European Economic Association

EIOPA European Insurance and Occupational Pensions Authority

EMI Electronic Money Institutions

ESMA European Securities and Markets Authority

ESRI Economic and Social Research Institute

EUCO European Council

FCA Financial Conduct Authority

FCA Framework Cooperation Agreement

FDI Foreign Direct Investment

FMD Financial Markets Division

FMI Financial Markets Infrastructure

FOE Freedom of Establishment

It is possible for an insurance undertaking authorised in one EU/EEA state to conduct business in another EU/EEA state. This business can be conducted in two ways – if the undertaking establishes a Branch operation and conducts business on a 'freedom of establishment' basis or if the undertaking writes business from the Home state to the Host state on a 'freedom of services' basis.

FOMC Federal Open Market Committee

FOS Freedom of Services

It is possible for an insurance undertaking authorised in one EU/EEA state to conduct business in another EU/EEA state. This business can be conducted in two ways – if the undertaking establishes a Branch operation and conducts business on a 'freedom of establishment' basis or if the undertaking writes business from the Home state to the Host state on a 'freedom of services' basis.

FSA Financial Services Authority

Body responsible for the regulation of the financial services industry in the United Kingdom between 2001 and 2013. Its responsibilities were subsequently split between the Prudential Regulation Authority and the Financial Conduct Authority.

FSC Financial Stability Committee

The Financial Stability Committee of the Central Bank, which is an advisory group to the Governor on all financial stability issues. The FSC is chaired by the Governor.

FSCS Financial Services Compensation Scheme

FSD Financial Stability Division

FSG Financial Stability Group

FTA Free Trade Agreement

FTE Full Time Equivalent

GBP Pound Sterling

GDP Gross Domestic Product

GDPR General Data Protection Regulation

GNP Gross National Product

HICP Harmonised Index of Consumer Prices

HPI House Price Index

ICAAP Internal Capital Adequacy Assessment Process

IEA Irish Economic Analysis

INSA Insurance - Actuarial, Analytics & Advisory Services

IR International Relations

IPD Investment Property Databank

IRC International Relations Committee

The International Relations Committee of the ECB. The IRC is responsible for forming policy views and advising the ECB Governing Council or General Council on external issues to the EU (including the IMF). It meets in 28 NCB format.

ISE Irish Stock Exchange

IUC Irish User Committee

JST Joint Supervisory Team

KFD Key Facts Document

LSH Lambert Smith Hampton

LSI Less significant institution

LTIM Long-Term International Migration

MFN Most-Favoured Nation

MiFID Markets in Financial Instruments Directive

The markets in financial instruments directive (MiFID) aims to increase the transparency across the European Union's financial markets and standardise the regulatory disclosures

required for particular markets. MiFID implemented new measures, such as pre- and post-trade transparency requirements, and set out the conduct standards for financial firms. The directive has been in force across the European Union (EU) since 2008. MiFID has a defined scope that primarily focuses on over the counter (OTC) transactions.

MoU Memorandum of Understanding

MoUPG Memorandum of Understanding Project Group

MPC Monetary Policy Committee

MPD Markets Policy Division

MS Member State

MSCI Morgan Stanley Capital International

NCA National Competent Authority

NiGEM National Institute Global Econometric Model for the UK and the World

NIESR National Institute of Economic and Social Research

NTB Non-Tariff Barrier

ONS Office for National Statistics

ORD Organisational Risk Division

OTC Over the Counter

OPEC Organization of the Petroleum Exporting Countries

PCF Pre-approved Controlled Function

PI Payment Institution

PLC Public Limited Company

PMI Purchasing Managers Index

PRA Prudential Regulatory Authority

The Prudential Regulation Authority is responsible for the prudential regulation and supervision of banks, building societies, credit unions, insurers and major investment firms in the UK.

PRISM Probability Risk and Impact System

The Probability Risk and Impact System (PRISM) is the Central Bank's risk-based framework for the supervision of regulated firms.

PSD2 Directive 2015/2366/EU on payment services

PSSD Payment and Securities Settlement Division

RCU Registry of Credit Unions

RES Resolution Division

RI Retail Intermediary

RICS Royal Institute of Chartered Surveyors

RRE Residential Real Estate

RUK Rest of United Kingdom

SEPA Single Euro Payments Area

SI Significant Institution

SIMI Society of the Irish Motor Industry

SME Small and Medium Enterprise

SMSD Securities Markets Supervision Division

SoR Split of Responsibilities

SRC Supervisory Risk Committee

SRD Supervisory Risk Division

SREP Supervisory Review and Evaluation Process

SSM Single Supervisory Mechanism

UCITS Undertakings for Collective Investment in Transferable Securities

UCITS are open-ended investment funds and may be established as unit trusts, common contractual funds, variable or fixed capital companies or Irish Collective Asset-management Vehicles (ICAV).

VAR Vector Autoregressive Model

[Omitted due to confidentiality]

WTO World Trade Organization