2016: II

Macro-Financial Review

Banc Ceannais na hÉireann
Central Bank of Ireland
Eurosystem

MACRO-FINANCIAL REVIEW

Notes

1. Unless otherwise stated, this document refers to data available on 30 November, 2016.

2. Unless otherwise stated, the aggregate banking data refer to all credit institutions operating in the Republic of Ireland.

   - *Irish retail banks* refer to the five banks offering retail banking services within the Irish State: Allied Irish Banks plc, The Governor and Company of the Bank of Ireland, Permanent TSB, KBC Bank Ireland plc and Ulster Bank Ireland Designated Activity Company.

   - *Foreign-owned resident banks* are foreign banking groups that have a subsidiary in the Republic of Ireland and are internationally focussed.

3. The following symbols are used:

e	estimate	H	half-year
f	forecast	rhs	right-hand scale
Q	quarter	lhs	left-hand scale

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Preface

The Macro-Financial Review offers an overview of the current state of the macro-financial environment in Ireland. Its aims are twofold: (i) to help the public, financial-market participants and international and national authorities better evaluate financial risks; and (ii) to promote informed dialogue on the financial system's strengths and weaknesses and efforts to strengthen its resilience.

The Review assembles some of the material kept under surveillance by the Financial Stability Committee of the Central Bank of Ireland. The Review focuses on downside risks but better-than-expected outcomes are also possible. It evaluates developments since the previous Review, published in June 2016.

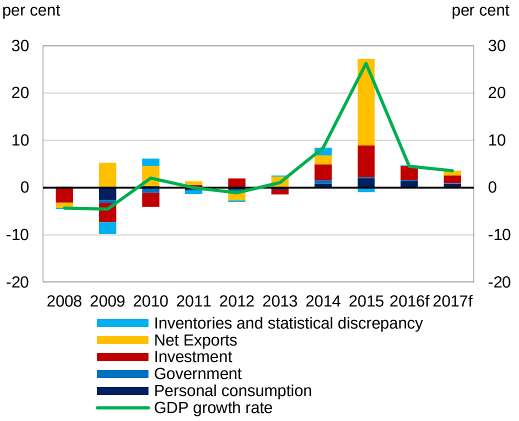
Réamhrá

Tugann an tAthbhreithniú Macra-Airgeadais forbhreathnú ar staid reatha na timpeallachta macra-airgeadais in Éirinn. Tá dhá aidhm aige: (i) cuidiú leis an bpobal, le rannpháirtithe margaidh airgeadais agus le húdaráis idirnáisiúnta agus náisiúnta chun measúnú a dhéanamh ar rioscaí airgeadais; agus (ii) díospóireacht fheasach a chur chun cinn maidir le láidreachtaí agus laigí an chórais airgeadais mar aon le hiarrachtaí chun a stóinseacht a neartú.

San Athbhreithniú, bailítear cuid den ábhar a bhíonn faoi fhaireachas an Choiste um Chobhsaíocht Airgeadais de chuid Bhanc Ceannais na hÉireann. Díríonn an tAthbhreithniú ar rioscaí ar an taobh thíos ach féadfaidh na torthaí a bheith níos fearr ná mar a bhíothas ag súil leis. Déanann an tAthbhreithniú measúnú ar fhorbairtí ón Athbhreithniú deireanach a foilsíodh i mí an Mheithimh 2016.

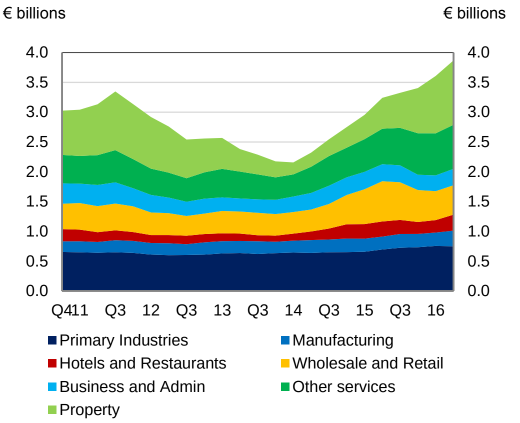
1. Overview

Chart A1: Composition of GDP growth



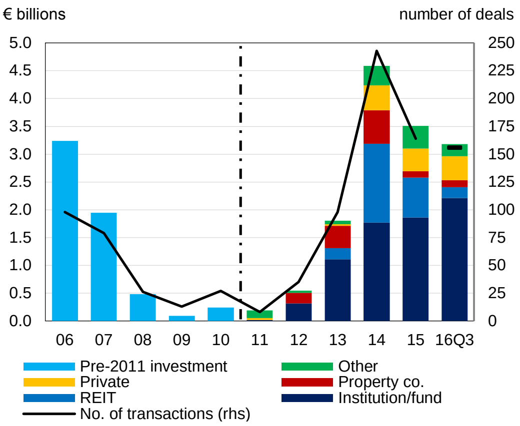
Source: CSO and Central Bank of Ireland.
Notes: 2016 and 2017 forecasts from the Central Bank's Quarterly Bulletin No. 4 2016.

Chart A2: Gross new lending to SMEs



Source: Central Bank of Ireland.
Notes: Chart shows the rolling 4-quarter total of gross new lending by banks to Irish resident SMEs excluding financial intermediation. Last observation: 2016Q2.

Chart A3: Sources of Irish commercial property investment expenditure



Source: CBRE Research.
Notes: 2016 data reflect the situation at the end of September. Investment spending relates to individual transactions worth at least €1 million. Breakdown by the original source of funding is only available from 2011.

Overview

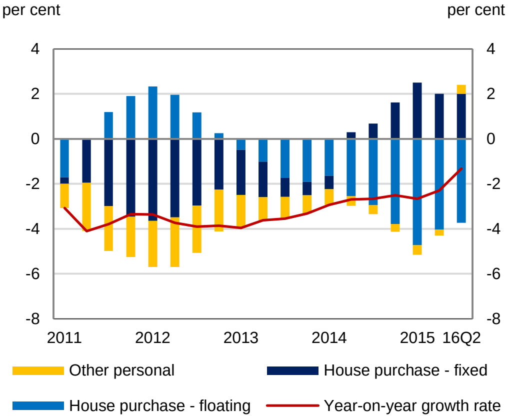
While financial market tensions have eased somewhat since earlier in the year and since the June 23 vote by the UK to leave the European Union, risks to European financial stability remain elevated. These arise from compressed risk premia in financial markets, non-performing loans on European bank balance sheets, high public and private debt in some EU Member States, political uncertainties, and the potential consequences of Brexit. Low nominal growth and low interest rates pose challenges to the profitability of European banks, insurers and pension funds. Global growth prospects remain subdued. In the euro area, GDP is expected to increase by an average of 1.6 per cent in 2016 and 2017. The potential for a faster-than-expected normalisation of monetary policy in the US and a further slowing of growth in emerging market economies could also have consequences for international financial stability.

Having been revised downwards following the Brexit referendum, growth projections (in GDP terms) for the Irish economy are 4.5 and 3.6 per cent in 2016 and 2017, respectively (Chart A1). This follows a GDP growth rate of 26.3 per cent last year which reflected a large level shift in capital assets. An underlying growth rate of close to 6 per cent in 2015 is estimated by the Central Bank. Although it will be a major source of uncertainty in the years ahead, it is too soon after the UK referendum to be able to assess all Brexit-related effects on the macro-financial environment in Ireland. Domestic demand is expected to be the main driver of growth over the forecast horizon, reflecting, in part, a positive outlook for the labour market and infrastructural investment. The balance of risks to the Irish economy is tilted to the downside owing to its vulnerability to domestic and external shocks, high public and private debt, and Brexit.

Non-financial private sector credit continues to decline, although a rise in new lending is now evident. In addition, some sub-segments of the market are seeing increases in credit once more, including in non-mortgage credit and fixed rate mortgage lending. The zero per cent countercyclical capital buffer (CCyB) rate currently in effect on Irish exposures primarily reflects aggregate credit conditions remaining relatively subdued.

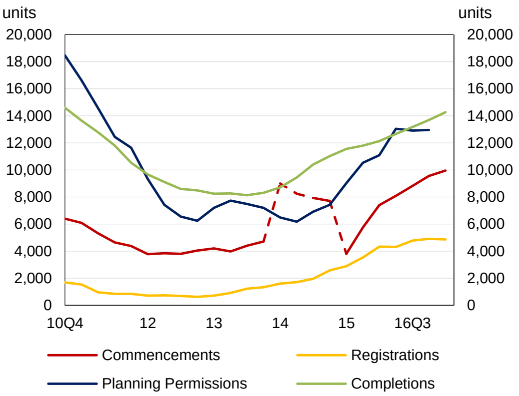
The outlook for the non-financial corporate sector is less positive than at the time of the last Review with Brexit posing a substantial downside risk to it. Weaker foreign demand, diminished investor confidence and, over the longer term, greater barriers to trade could materialise. The euro has strengthened against sterling of late, making operating conditions tougher for Irish exporters to the UK. The financial

Chart A4: Household credit – contributions to year-on-year change



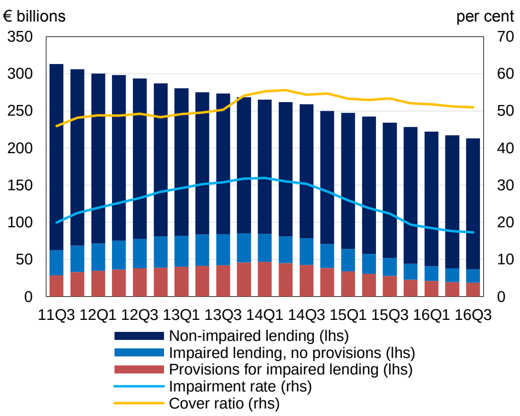
Source: Central Bank of Ireland.
Notes: Floating/variable rate house loans include fixed rate mortgages up to one-year. Last observation: 2016Q2.

Chart A5: Residential construction activity: (Rolling 4Q total)



Source: CSO & Department of Housing, Planning, Community and Local Government.
Note: The adoption of new building codes from March 2014 resulted in a significant front-loading of commencements in the first quarter of 2014, the impact of which remained in the statistics until 2015Q1. This period is represented by the jagged red line. Latest observations 2016Q3, except for planning permissions data, for which 2016Q2 data are the latest available.

Chart A6: Irish retail banks' credit exposures and asset quality



Source: Central Bank of Ireland.
Notes: Data are consolidated. Total lending is represented by drawn exposures. Impairments are represented by CRD default loans. Last observation: 2016Q3.

position of SMEs varies considerably. High indebtedness leaves firms vulnerable to interest rate increases and declines in revenue. The net flow of credit to SMEs remains negative, although new lending is increasing (Chart A2).

Total returns on Irish commercial property are declining but remain higher than those in other countries. Rental values continue to rise. A shortage of commercial property in particular parts of the country, most notably Dublin, is becoming more evident. Investment (Chart A3) and construction in the sector have been higher in recent years. Commercial property investment is largely funded from abroad. This source of investment is vulnerable to global economic and financial uncertainty and investment opportunities elsewhere. The UK's vote to leave the EU could see an increased demand for commercial real estate but also leaves the market vulnerable to the uncertainties that Brexit creates.

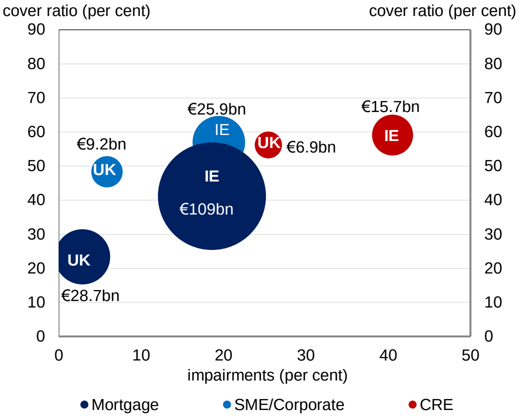
Household credit growth remains negative with an increase in fixed-rate mortgages not being sufficient to offset a decline in lending at floating/variable rates (Chart A4). While deleveraging continues, household debt remains high and its distribution varies by household age cohort, with 35-44 age cohort households being relatively highly indebted. Most household debt relates to mortgages. The number of mortgage arrears cases continues to fall, with loan modifications (including restructures) contributing.

Residential property price growth has declined from recent peaks, although there are disparities between Dublin, where the annual rate of increase was 5.4 per cent in September 2016, and outside Dublin, where it was 11 per cent over the same period. Rental growth remains strong, with regional variability also occurring. Residential sales have weakened over the past twelve months, while the share of those sales accounted for by first-time buyers has declined since 2011. A shortage of housing supply for sale or rent is a feature of the residential property market. The amount of second-hand stock for sale is low. Residential construction activity is increasing (Chart A5) but annual new supply is less than projected long-term demand.

At end-November, the Central Bank announced the findings of its review of the macroprudential mortgage lending requirements. The review found that the overall framework of the regulations is appropriate and effective in meeting the objectives of the measures, which are to strengthen households' and banks' resilience and curb price-credit spirals in the housing market. A number of structural changes were identified which can improve the effectiveness and sustainability of the framework, including removing the property value threshold for the 90 per cent LTV limit that applies to first-time buyers.

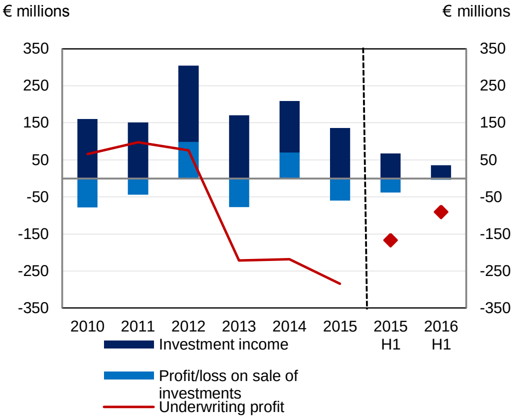
There has been an improvement in the public finances in recent years. Budgetary developments over the medium-term will occur against a background of the balance of risks to domestic economic projections being to the downside. The Irish sovereign

Chart A7: Loan quality by sector and geography



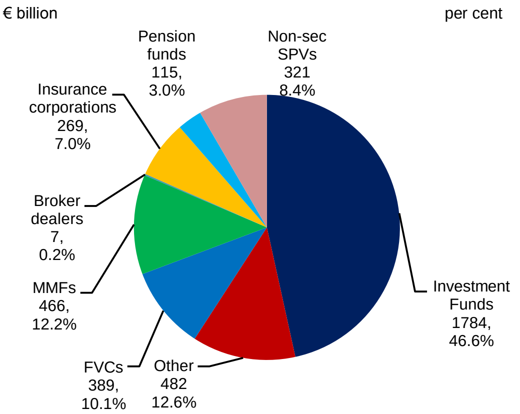
Source: Central Bank of Ireland.
Notes: Data are consolidated. Size of circle represents the share of lending to that particular sector. Impairment rate calculated as CRD default loans/drawn exposures shown on the horizontal axis. Cover ratio, calculated as Impairment Provisions/CRD default loans shown on the vertical axis. Data relate to 2016Q3.

Chart A8: Non-life insurers' underwriting profits and investment income and gains



Source: Central Bank of Ireland.
Notes: Data are an aggregation of domestically-focused high-impact firms who collectively write approximately 80 per cent of Irish-risk business. Profit/loss on sale of investments includes realised and unrealised gains and losses.

Chart A9: Structure of the Irish non-bank financial sector



Source: Central Bank of Ireland.
Notes: Data as at 2016Q1, as 2016Q2 data are not available across all sectors. Total value of assets amounted to €3,801 billion. Insurance corporations are covered in section 4.2, while pension funds are regulated by the Pensions Authority.

bond market has benefitted from historically low bond yields and strong investor demand in recent years. While composite indicators of systemic stress in euro area sovereign bond markets are well below 2012 sovereign crisis levels, high public debt in some EU Member States and the possibility of an upward revision in risk premia could cause market tensions. Bond yields have risen of late, with political uncertainty and revisions to inflation, growth and policy rate expectations possibly contributing.

The net-interest income of Irish retail banks, their largest source of income, declined marginally in 2016H1 compared to the same period in 2015. Contracting balance sheets and the low interest rate environment hinder banks in generating sustainable sources of income. Credit quality continues to improve and the value of non-performing loans held by Irish retail banks has fallen substantially over the past three years (Chart A6). The stock of impairment provisions has also declined.

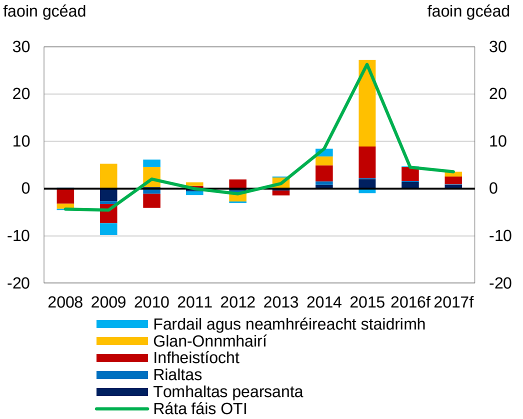
Although pension deficits have had a negative effect on it, there was a one per cent increase in the Irish retail banks' aggregate transitional common equity Tier 1 ratio to 17.5 per cent of risk-weighted assets between March and June. Bank capital remains vulnerable to the high level of non-performing loans on the banks' balance sheets, changes in the interest-rate environment, and any adverse effects arising from Brexit. Over one-fifth of Irish retail banks' loan exposures are UK-related (Chart A7), while the share of new lending to the UK was just under 30 per cent of total credit extended in 2016Q2. The UK's exit from the EU could have long-term structural consequences for those Irish banks with a presence there.

All of the domestically-focused high-impact non-life insurance firms reported underwriting losses in 2016H1 (Chart A8), with those losses primarily owing to the Irish motor market. Some high-impact firms may have to adjust their business model in the longer term in response to the UK's withdrawal from the EU. The domestic non-life insurance sector has also been affected by the low-interest rate environment, with interest income having fallen over time. The overall solvency position of the non-life sector is high. Domestic life insurers are also well-capitalised under the new regulatory Solvency II standards. Improving economic conditions provide opportunities for life-insurance firms to generate additional revenue but they also face competition from outside the sector from firms offering similar products. Domestic life firms have little direct exposure to the UK but may be affected by any adverse effects on the Irish economy arising from Brexit.

While the non-bank financial intermediary sector provides an additional channel to banking for the intermediation of funds, it also poses risks to financial stability at the international level. These include leverage, maturity transformation and liquidity risk. The Irish non-bank financial intermediary sector largely comprises funds and special purpose vehicles (Chart A9). There is limited evidence of direct risks from the sector to the domestic financial system due to the international nature of the business. Financial market volatility after the UK vote to leave the EU had a limited impact on investor flows vis-à-vis Irish funds. Investor flows into and out of sterling-denominated investor funds broadly offset each other in 2016Q3. This contrasts with significant net inflows into US dollar- and, to a lesser extent, euro-denominated investment funds. Sterling-denominated money market funds saw net inflows prior to and in the aftermath of the Brexit vote.

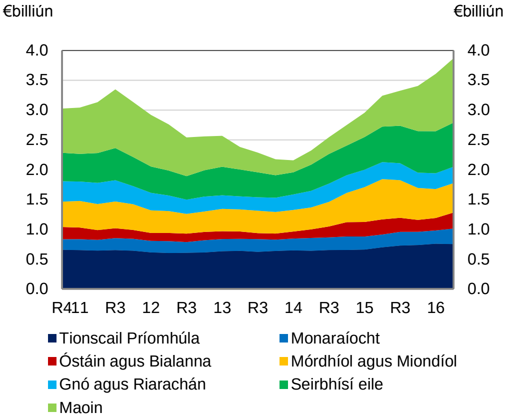
1. Forbhreathnú

Cairt A1: Comhdhéanamh fhás OTI



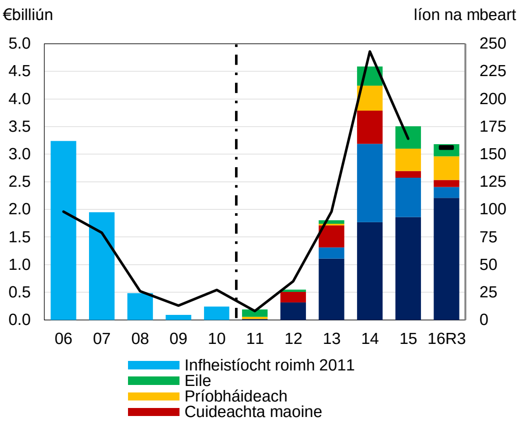
Foinse: CSO agus Banc Ceannais na hÉireann.
Nótaí: Réamhaisnéisí 2016 agus 2017 ó Fhaisnéis Ráithiúil Uimh.4 2016 de chuid an Bhainc Ceannais.

Cairt A2: Oll-iasachtú nua chuig FBManna



Foinse: Banc Ceannais na hÉireann.
Nótaí: Léirítear sa Chairt oll-iasachtú iomlán nua ó na bainc chuig FBManna atá lonnaithe in Éirinn le linn na 4 ráithe leanúnacha lena n-eisiatar idirghabháil airgeadais. Grinniú deireanach: 2016R2.

Cairt A3: Foinsí caiteachais infheistíochta i leith réadmhaoin tráchtála na hÉireann



Foinse: Taighde CBRF
Nótaí: Léiríonn sonraí 2016 an staid a bhí ann ag deireadh Mheán Fómhair. Baineann caiteachas infheistíochta le hidirbhearta leithleacha de luach €1 milliún ar a laghad. Níl miondealú de réir na bunfhoinse maoinithe ar fáil ach do 2011.

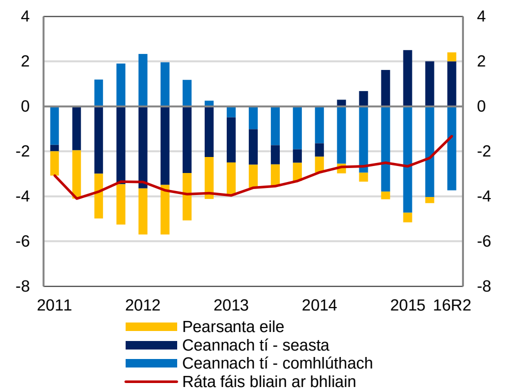
Forbhreathnú

Cé go bhfuil maolú áirithe tagtha ar an teannas sna margaí airgeadais ó thús na bliana agus ón vótáil sa Ríocht Aontaithe an 23 Meitheamh maidir le himeacht na Breataine ón Aontas Eorpach, tá rioscaí ann i gcónaí do chobhsaíocht airgeadais na hEorpa. Eascraíonn na rioscaí seo as biseach riosca comhbhrúite sna margaí airgeadais, iasachtaí neamhthuillmheacha ar chláir chomhardaithe na mbanc Eorpach, fiachas ard poiblí agus príobháideach i mBallstáit éagsúla AE, éiginnteachtaí polaitiúla, agus as iarmhairtí ionchasacha Brexit. Cruthaíonn fás ainmniúil íseal agus rátaí ísle úis dúshláin do bhrabúsacht na mbanc Eorpach, na n-árachóirí Eorpacha agus na gcistí pinsean Eorpacha. Tá na hionchais maidir leis an bhfás domhanda maolaithe i gcónaí. Sa limistéar euro, meastar go dtiocfaidh méadú 1.6 faoin gcéad, ar an meán, ar OTI in 2016 agus 2017. Ina theannta sin, d'fhéadfadh go mbeadh iarmhairtí ar chobhsaíocht airgeadais idirnáisiúnta ag an bhféidearthacht go mbeidh normalú níos tapúla ná mar a bhíothas ag súil leis ar bheartas airgeadaíochta sna SA agus go mbeidh moilliú breise ar an bhfás i ngeilleagair margaidh éiritheacha.

Tar éis athbhreithniú anuas a dhéanamh orthu i ndiaidh reifreann Brexit, is iad 4.5 agus 3.6 faoin gcéad (i dtéarmaí OTI) na réamh-mheastacháin fáis do gheilleagar na hÉireann i leith 2016 agus 2017 faoi seach (Chart A1). Ba é 26.3 faoin gcéad ráta fáis na OTI anuraidh, rud a léirigh aistriú mór sócmhainní caipitil. Measann an Banc Ceannais go raibh an bunráta fáis gar do 6 faoin gcéad in 2015. Cé go mbeidh sé ina mhórfhoinse éiginnteachta sna blianta atá romhainn, tá sé róluath i ndiaidh an reifrinn sa RA measúnú a dhéanamh ar na héifeachtaí go léir a bheidh ag Brexit ar an timpeallacht macra-airgeadais in Éirinn. Meastar go mbeidh an t-éileamh intíre mar phríomhspreagadh an fháis thar thréimhse na réamhaisnéise, rud a léiríonn, go páirteach, ionchas dearfach do mhargadh an tsaothair agus d'infheistíocht bonneagair. Tá cothromaíocht na rioscaí do gheilleagar na hÉireann claonta ar an taobh thíos mar gheall ar a leochaileacht do thurraingí intíre agus seachtracha, don ardfhiachas poiblí agus príobháideach agus do Brexit.

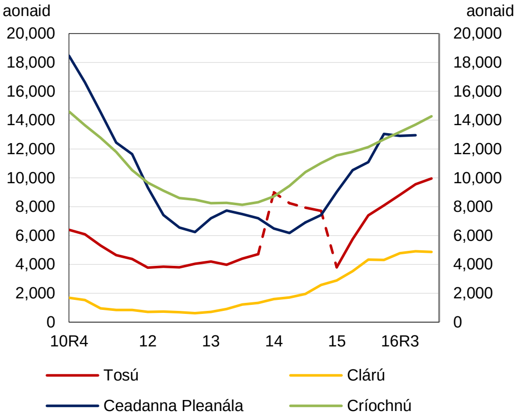
Leanann an creidmheas san earnáil phríobháideach neamhairgeadais de bheith ag laghdú ach is léir anois go bhfuil méadú tagtha ar iasachtú nua. Ina theannta sin, tá méaduithe le feiceáil athuair ar chreidmheas i roinnt fodheighleog den mhargadh, lena n-áirítear creidmheas neamh-mhorgáiste agus iasachtú morgáiste ráta sheasta. Le ráta an chúlchiste fhritimthriallaigh (CCyB) atá i bhfeidhm faoi láthair maidir le neamhchosaintí Éireannacha, arb ionann é agus nialas faoin gcéad, léirítear go bhfuil na dálaí creidmheasa comhiomlána

Cairt A4: Creidmheas teaghlach - athrú bliain-ar-bhliain



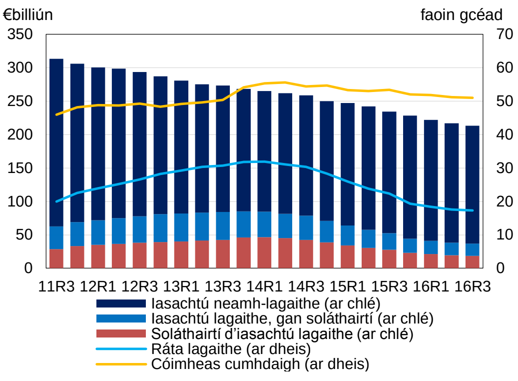
Foinse: Banc Ceannais na hÉireann.
Nótaí: Áirítear morgáistí ráta sheasta suas go dtí aon bhliain amháin in iasachtaí tithíochta ráta chomhlúthaigh/inathraithigh. Grinniú deireanach: 2016R2.

Cairt A5: Gníomhaíocht foirgníochta cónaithe: (Iomlán do na 4R leanúnacha)



Foinse: CSO & an Roinn Tithíochta, Pleanála, Pobail agus Rialtais Áitiúil
Nóta: Bhí tús-ualú suntasach i gceist le tosuithe sa chéad ráithe de 2014 de thoradh ghlacadh na gcód tógála nua i Márta 2014 agus bhí iarmhairt an méid sin le feiceáil sa staidreamh go dtí R1 2015. Seasann an líne eangach dhearg don tréimhse. Grinniú is déanaí R3 2016, ach i gcás sonraí maidir le cead pleanála is iad na sonraí ó R2 2016 na sonraí is déanaí.

Cairt A6: Neamhchosaintí na mbanc Éireannach miondíola ar chreidmheas agus cáilíocht a sócmhainní



Foinse: Banc Ceannais na hÉireann.
Nótaí: Rinneadh na sonraí a chomhdhlúthú. Léirítear an t-iasachtú iomlán le neamhchosaintí tarraingthe. Léirítear lagú le hiasachtaí mainneachtana CRD. Grinniú deireanach: R3 2016

sách maolaithe.

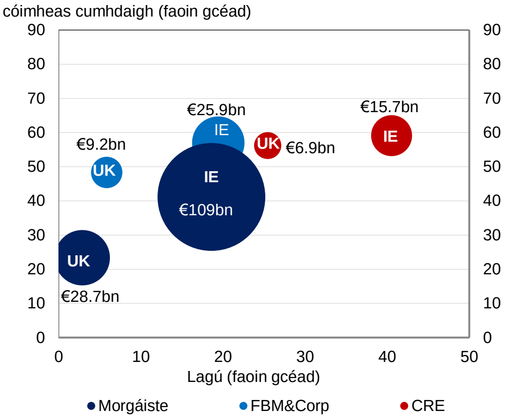
Níl an t-ionchas don earnáil chorparáideach neamhairgeadais chomh dearfach leis an ionchas a bhí ann tráth an Athbhreithnithe dheireanaigh toisc go ngabhann riosca suntasach ar an taobh thíos leis de thoradh Brexit. D'fhéadfadh go dtiocfadh an méid seo a leanas chun cinn: éileamh níos laige ón gcoigríoch, muinín maolaithe tomhaltóirí agus, thar an bhfadtéarma, constaicí breise ar thrádáil. Neartaigh an euro in aghaidh steirling le déanaí, rud a chruthaíonn dálaí níos deacra oibríochta d'onnmhaireoirí Éireannacha a onnmhairíonn earraí chuig an RA. Tá éagsúlacht mhór idir staideanna airgeadais FBManna. Fágann féichiúnas ard go bhfuil gnólachtaí leochaileach d'arduithe ar rátaí úis agus do laghduithe ar ioncam. Tá an glansreabhadh creidmheasa chuig FBManna diúltach i gcónaí ach tá méadú ag teacht ar iasachtú nua (Chart A2).

Tá na fáltais iomlána ar réadmhaoin tráchtála na hÉireann ag laghdú ach tá siad fós níos airde ná mar atá i dtíortha eile. Leanann luachanna cíosa de bheith ag ardú. Is léir go bhfuil ganntanas réadmhaoine tráchtála in áiteanna ar leith sa tír, go háirithe i mBaile Átha Cliath. Tá infheistíocht (Chart A3) agus foirgníocht san earnáil níos airde le blianta beaga anuas. Is ón gcoigríoch don chuid is mó atá infheistíocht réadmhaoine tráchtála ag teacht. Tá foinse na hinfheistíochta sin leochaileach d'éiginnteachtaí domhanda eacnamaíocha agus airgeadais agus do dheiseanna infheistíochta in áiteanna eile. De thoradh na vótála sa RA chun imeacht ón AE, d'fhéadfadh go mbeadh níos mó éilimh ar réadmhaoin eastáit réadaigh ach d'fhéadfaí freisin go bhfágfaí an margadh sin leochaileach do na héiginnteachtaí a eascraíonn as Brexit.

Tá an fás ar chreidmheas teaghlach diúltach i gcónaí agus ní leor an méadú ar mhorgáistí ráta sheasta chun laghdú ar iasachtú ag rátaí comhlúthacha/athraitheacha a fhritháireamh (Chart A4). Cé go leanann an díghiaráil, tá fiachas teaghlach ard i gcónaí agus tá dáileadh an fhiachais sin éagsúil ag brath ar aoisghrúpa na dteaghlach. Tá leibhéal fiachais measartha ard i measc aoisghrúpa 35-44. Baineann formhór fhiachas na dteaghlach le morgáistí. Leanann líon na gcásanna de riaráistí morgáiste de bheith ag laghdú agus tá modhnuithe iasachtaí (lena n-áirítear athstruchtúrú) ag rannchuidiú leis seo.

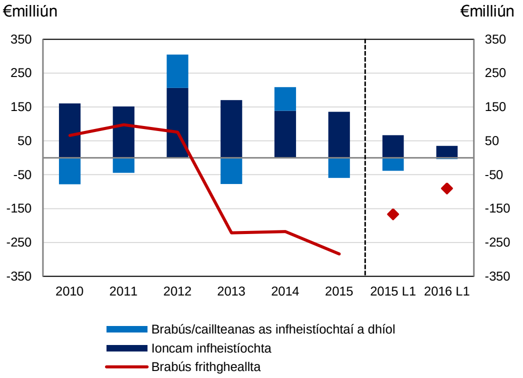
Tá laghdú tagtha ar an bhfás ar phraghsanna réadmhaoine cónaithe ó na buaicphointí a chonacthas le déanaí ach tá éagothromaíochtaí idir Baile Átha Cliath, áit inarbh ionann ráta bliantúil an mhéadaithe agus 4.5 faoin gcéad i mí Lúnasa 2016, agus lasmuigh de Bhaile Átha Cliath, áit inarbh ionann ráta bliantúil an mhéadaithe agus 11.4 faoin gcéad thar an tréimhse chéanna. Tá an meadú ar chíosanna láidir i gcónaí agus arís tá éagothromaíocht réigiúnach le feiceáil ann. Tá lagú tagtha ar dhíolacháin réadmhaoine cónaithe le dhá mhí dhéag anuas, fad atá laghdú tagtha ar cion na ndíolachán sin ag ceannaitheoirí céaduaire ó 2011 i leith. Is gné den mhargadh réadmhaoine

Cairt A7: Cáilíocht iasachtaí de réir earnála agus tíreolaíochta



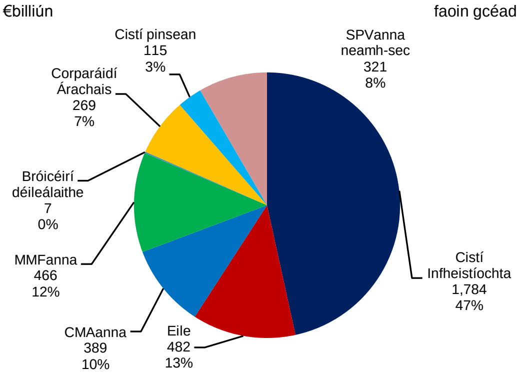
Foinse: Banc Ceannais na hÉireann.
Nótaí: Rinneadh na sonraí a chomhdhlúthú. Léiríonn méid an chiorcail an cion den iasachtú chuig an earnáil sin. Taispeántar an ráta lagaithe, arna ríomh mar iasachtaí mainneachtana CRD/neamhchosaintí tarraingthe, ar na haiseanna ceartingearacha. Taispeántar an cóimheas cumhdaigh, arna ríomh mar sholáthairtí um lagú/iasachtaí mainneachtana CRD, ar an ais chothrománach. Baineann na sonraí seo le R3 2016.

Cairt A8: Brabúis frithgheallta agus ioncam infheistíochta agus gnóthachain de chuid árachóirí neamhshaoil



Foinse: Banc Ceannais na hÉireann.
Nótaí: Léiríonn na sonraí comhiomlánú gnólachtaí ardtionchair atá dírithe go hintíre agus a sheolann tuairim is 80 faoin gcéad de ghnó riosca na hÉireann. I mbrabús/i gcaillteanas ar dhíol infheistíochtaí, folaítear gnóthachain agus caillteanais réadaithe agus neamhréadaithe.

Cairt A9: Struchtúr earnáil airgeadais neamhbhainc na hÉireann



Foinse: Banc Ceannais na hÉireann.
Nótaí: Sonraí amhail ag R1 2016; níl sonraí R2 2016 ar fáil do na hearnálacha go léir. B'ionann luach iomlán na sócmhainní agus €3,801 billiún. Clúdaítear corparáidí árachais i gcuid 4.2, fad gurb é an tÚdarás Pinsean a rialaíonn cistí pinsean.

cónaithe é ganntanas an tsoláthair tithíochta atá le díol nó le ligean ar cíos. Tá an méid stoic dara láimhe le díol íseal. Tá an ghníomhaíocht foirgníochta maidir le réadmhaoin chónaithe ag méadú (Chart A5) ach tá an soláthar nua bliantúil níos lú ná an t-éileamh fadtéarmach réamh-mheasta.

Ag deireadh mhí na Samhna, d'fhógair an Banc Ceannais fionnachtana a athbhreithnithe ar na ceanglais macrastuamachta um iasachtú morgáiste. Ba é tátal an athbhreithnithe go bhfuil creat foriomlán na rialachán iomchuí agus éifeachtach chun freastal ar chuspóirí na mbeart, is iad sin stóinseacht na dteaghlach agus na mbanc a neartú agus bíseanna phraghsanna creidmheasa sa mhargadh tithíochta shrianadh. Aithníodh roinnt athruithe struchtúracha lena bhféadfar éifeachtacht agus inmharthanacht an chreata a fheabhsú, lena n-áirítear tairseach luach na maoine a bhaint i ndáil le huasteorainn 90 faoin gcéad CIL do cheannaitheoirí céaduaire.

Tá feabhas tagtha ar airgeadas poiblí le blianta beaga anuas. Beidh forbairtí buiséadacha thar an meántéarma ag tarlú i bhfianaise cothromaíocht na rioscaí a bhaineann le réamh-mheastacháin eacnamaíocha intíre a bheith ar an taobh thíos. Le blianta beaga anuas, tá margadh bannaí ceannasacha na hÉireann ag tairbhiú de thorthaí bannaí atá íseal ó thaobh na staire de agus d'éileamh láidir ó infheisteoirí. Cé go bhfuil táscairí ilchodacha struis shistéamaigh i margaí bannaí ceannasacha an limistéir euro go mór faoi bhun na leibhéal a chonacthas in 2012 le linn na géarchéime ceannasaí, d'fhéadfadh go gcruthófaí teannas sna margaí mar thoradh ar an bhfiachas ard poiblí i mBallstáit áirithe AE mar aon leis an bhféidearthacht go mbeidh athbhreithniú aníos ar bhiseach riosca. Tá méadú tagtha ar thorthaí bannaí le déanaí, agus féadfaidh go bhfuil an éiginnteacht pholaitiúil agus na hathbhreithnithe ar ionchais maidir le boilsciú, le fás agus le ráta beartais ag cur leis sin.

Tháinig laghdú beag ar ghlanioncam úis na mbanc miondíola Éireannacha, an fhoinse is mó ioncaim atá acu, sa chéad leath de 2016 i gcomparáid leis an tréimhse chéanna in 2015. Cláir chomhardaithe atá i mbun craptha agus timpeallacht na rátaí ísle úis, is tosca iad sin a chuireann cosc le cumas na mbanc foinsí inmharthana ioncaim a ghiniúint. Leanann cáilíocht chreidmheasa de bheith ag feabhsú agus tá laghdú suntasach tagtha le trí bliana anuas ar luach na n-iasachtaí neamhthuillmheacha atá ar seilbh ag na bainc mhiondíola Éireannacha (Chart A6). Tá laghdú tagtha freisin ar stoc na soláthairtí um lagú.

Cé go raibh éifeacht dhiúltach ag easnaimh pinsean air, tháinig méadú aon faoin gcéad ar bhunchaipiteal idirthréimhseach leibhéal 1 go dtí 17.5 faoin gcéad de shócmhainní riosca-ualaithe idir mí an Mhárta agus mí an Mheithimh. Tá caipiteal na mbanc leochaileach i gcónaí d'ardleibhéal na n-iasachtaí neamhthuillmheacha ar chláir chomhardaithe na mbanc, d'athruithe ar thimpeallacht na rátaí úis agus d'aon éifeachtaí díobhálacha a bheidh ag Brexit. Baineann breis agus aon chúigiú de neamhchosaintí iasachta na mbanc miondíola Éireannach leis an Ríocht Aontaithe (Chart A7), fad atá an cion den iasachtú nua chuig an RA díreach faoi bhun 30 faoin gcéad den chreidmheas iomlán arna eisiúint i R2 2016. D'fhéadfadh go mbeadh iarmhairtí struchtúracha fadtéarmacha ag imeacht na Ríochta Aontaithe ón AE ar na bainc Éireannacha sin a bhfuil láithreacht acu sa Ríocht Aontaithe.

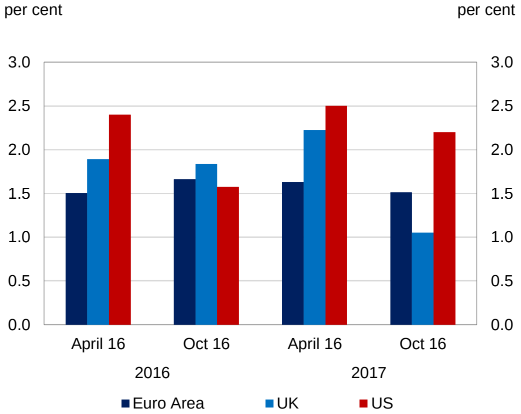
Tuairiscíodh caillteanais frithghealltа sa chéad leath de 2016 ag na gnólachtaí árachais neamhshaoil ardtionchair go léir atá dírithe go hintíre agus tá na caillteanais sin inchurtha go príomha do mhargadh mótair na hÉireann (Chart A8). B'fhéidir go mbeidh ar ghnólachtaí ardtionchair áirithe a gcuid samhlacha gnó a choigeartú san fhadtéarma mar fhreagairt ar imeacht na Ríochta Aontaithe ón AE. Rinne timpeallacht na rátaí ísle úis difear freisin don earnáil árachais neamhshaoil intíre sa mhéid go bhfuil laghdú tagtha ar ioncam úis le himeacht aimsire. Tá staid fhoriomlán sócmhainneachta na hearnála neamhshaoil ard. Tá árachóirí saoil intíre dea-chaipitlithe freisin faoi chaighdeáin nua rialála Shócmhainneacht II. Agus na dálaí eacnamaíocha ag dul i bhfeabhas, cuirtear deiseanna ar fáil do ghnólachtaí árachais saoil chun ioncam breise a ghiniúint ach bíonn iomaíocht acu freisin lasmuigh den earnáil ó ghnólachtaí a mbíonn táirgí comhchosúla á dtairiscint acu. Is beag neamhchosaint dhíreach atá ag gnólachtaí saoil intíre ar an RA ach féadfar go ndéanfar difear dóibh le haon éifeachtaí díobhálacha a bheidh ar gheilleagar na hÉireann de thoradh Brexit.

Cé go gcuireann earnáil na n-idirghabhálaithe airgeadais neamhbhainc meán breise baincéireachta ar fáil maidir le hidirghabháil cistí, tá rioscaí don chobhsaíocht airgeadais ar an leibhéal idirnáisiúnta ag gabháil leis freisin. Orthu sin, áirítear giaráil, claochlú aibíochta agus riosca leachtachta. Cuimsíonn earnáil na n-idirghabhálaithe airgeadais neamhbhainc in Éirinn cistí agus aonáin shainchuspóireacha (Chart A9). De thoradh chineál idirnáisiúnta an ghnó, is beag fianaise atá ann go gcruthaíonn an earnáil rioscaí díreacha don chóras airgeadais intíre. Bhí iarmhairt theoranta ag an luaineacht sna margaí airgeadais i ndiaidh na vótála sa RA chun imeacht ón AE ar shreafaí chistí infheisteoirí i leith cistí Éireannacha. I R3 2016, rinneadh insreafaí de chuid infheisteoirí i gcistí infheisteoirí arna n-ainmniú i steirling a fhritháireamh, don chuid is mó, le heis-sreafaí de chuid infheisteoirí ón gcéanna. Tá sé seo i gcodarsnacht le hinsreafaí glana suntasacha i gcistí infheistíochta arna n-ainmniú i ndollair SA agus in euro. Chonacthas insreafaí glana i gcistí margaidh airgid arna n-ainmniú i steirling roimh vótáil Brexit agus ina diaidh.

2. International economic and financial system developments

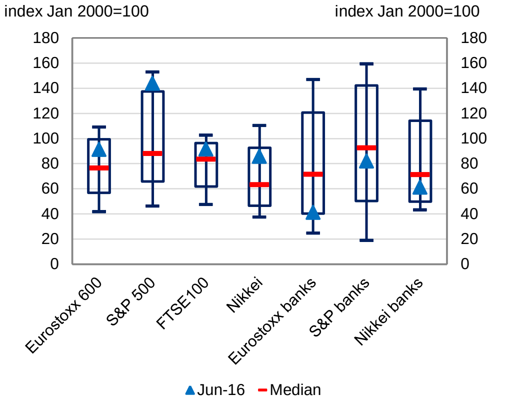
Notwithstanding the easing in market tensions since the start of the year and the relatively quick recovery in most markets following the vote by the UK to leave the EU and the US presidential election, risks to international financial stability remain elevated. The threat of simultaneous corrections across asset classes persists given compressed global risk premia in financial markets and macroeconomic and political uncertainty. Investor confidence in European banks has deteriorated, as the sector faces both cyclical and structural challenges to profitability, including market expectations of an extended period of low nominal growth and interest rates and slow progress in addressing large stocks of NPLs in some Member States.

Chart 1: Real GDP growth forecasts, 2016-2017



Source: IMF World Economic Outlook (WEO) database.

Chart 2: Equity market performance, 2000-2016



Source: Bloomberg and Central Bank of Ireland calculations.
Notes: The vertical line shows minimum-maximum range; the box shows 10 per centile- 90 percentile range. Triangle indicates index level in June 2016 (Brexit vote). Data range: 1Jan 2000 to 8 December 2016.

Since the last Review, global economic activity remains subdued. EA GDP growth slowed to 0.3 per cent in both 2016Q2 and Q3. Nevertheless, GDP in the EA is still expected to increase by an average of 1.6 per cent in both 2016 and 2017. Although US economic activity lost some momentum during the first half of 2016, there appears to have been a pickup more recently.[1] UK economic activity has remained resilient following the referendum result in June: GDP is expected to increase by 1.9 per cent in 2016. The UK's prospects for 2017, however, have been downgraded by many commentators, with a growth rate of about one per cent expected (Chart 1).

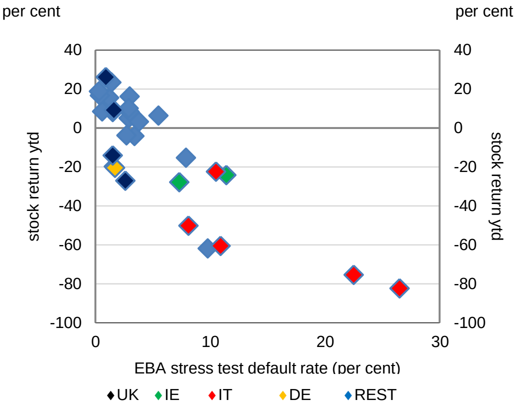
Risks to global growth have increased. The lack of clarity about future economic and political agreements between the EU and the UK raises uncertainty. The persistently high level of NPLs in the EA banking sector weighs on lending to the euro area economy. Increased geopolitical tensions and uncertainties surrounding macroeconomic policy in advanced economies and the medium-term prospects for emerging markets, particularly the Chinese economy, could also affect growth prospects.

Financial market tensions in January and February 2016 eased subsequently, aided in part by further monetary policy accommodation. However, medium-term risks to international financial stability arise amid compressed global risk premia, weaker profit prospects for European banks, insurers and pension funds, and greater macroeconomic and political risks.[2]

Despite some recovery in recent weeks, European bank equity valuations have underperformed other equity markets and traded close to lows of recent years during the summer (Chart 2). Following the Brexit vote and the EBA stress test results, investor sentiment was particularly negative toward banks with high stocks of legacy NPLs and those potentially facing large misconduct fines (Chart 3). The European banking sector faces

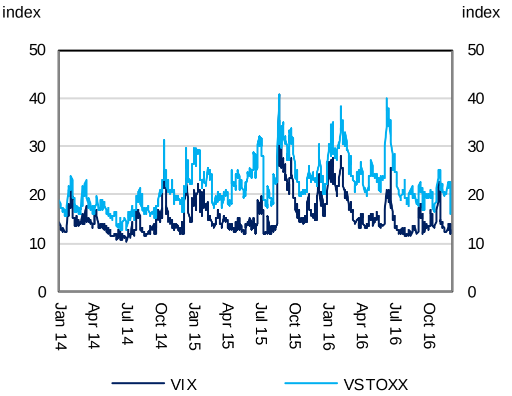
[1] According to the Bureau of Economic Analysis's advance estimate, annualised US GDP growth rose from 1.4 per cent in Q2 to 3.2 per cent in Q3.
[2] The expected prolongation of the low interest rate environment also has negative repercussions for European insurers and pension funds - see section 4.2.

Chart 3: Selected European banks' equity prices and default rates



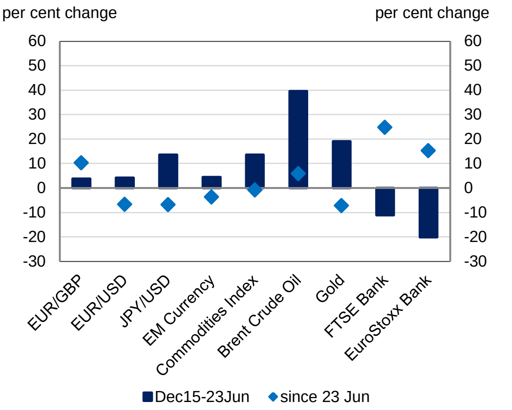
Source: Bloomberg and EBA stress test results.
Notes: EBA default rate is defaulted exposures as a percentage of total exposures as at December 2015 as per EBA stress test data. YTD is percentage change in share price in 2016. REST are listed banks from other EU Member States included in the stress test. Last observation: 8 December 2016.

Chart 4: Stock market volatility



Source: Bloomberg and Central Bank of Ireland calculations.
Notes: Last observation: 8 December 2016.

Chart 5: Financial market movements since Brexit vote



Source: Bloomberg and Central Bank of Ireland calculations.
Notes: Last observation 08 December 2016.

structural business model challenges, including from overcapacity and evolving market and regulatory environments, as well as cyclical pressures arising from the low nominal growth and low interest rate environment. Weak profitability is hindering banks' ability to strengthen solvency ratios further either through retained profits or external capital issuance. European banks have lower price-to-book and return-on-equity ratios than US peers and equity and CoCo bond issuance this year has been subdued.[3,4] The sector remains vulnerable to a further deterioration in market confidence, political developments, adverse EA and global growth developments, losses on problem assets, uncertainty in relation to regulatory implementation, and a rise in global risk aversion.

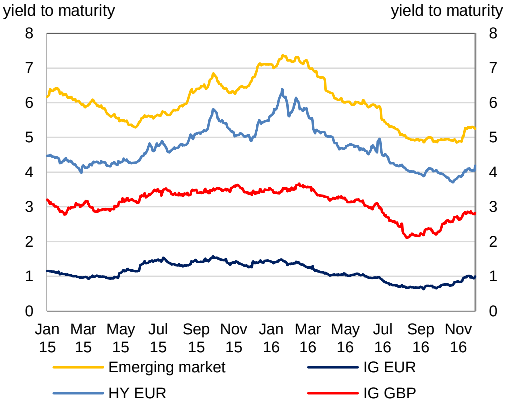
Financial market volatility temporarily increased following the June 23 vote by the UK to leave the EU and, to a lesser extent, the US presidential election (Chart 4). Overall financial market developments since the Brexit referendum have been relatively muted, aided by policy measures including quantitative easing and market expectations concerning monetary policy rate normalisation[5] (Chart 5). Following a sell-off earlier this year, capital flows returned to emerging markets and corporate yields (UK, EA[6] and high yield) traded near multi-year lows during the summer (Chart 6). Commodity prices also experienced a modest recovery this year. Towards the end of the review period, some of these gains were partially relinquished and euro area sovereign bond yields (see section 3.4) and corporate bond yields increased somewhat, albeit remaining at historically low levels. Higher policy uncertainty, following the US presidential elections, may be contributing to these developments. Market expectations for US inflation and policy rates have been revised upwards since the 8 November general election.[7]

Periods of increased financial market volatility have been evident since the second half of 2015 (Chart 4). An on-going search for yield would hold the potential for a mispricing of risk and a disorderly adjustment across multiple asset classes occurring. Further market volatility could arise from political events (such as the course that Brexit negotiations take), a more aggressive-than-expected normalisation of US policy rates, a real estate downturn in the UK or EA Member States, or renewed emerging market fragilities.

Sovereign stress in euro area bond markets remains restrained, although high public debt, weak economic growth and political developments could revive market concerns. High debt burdens

[3] For a detailed analysis of the profitability problems facing European banks, see October 2016 IMF Global Financial Stability Report. The IMF estimates that even under a cyclical recovery scenario of rising interest rates, lower provisions and rising fee income, almost one-third of the European banking system remains weak. The ECB Financial Stability Review, November 2016, also contains extensive analysis of the European banking sector.
[4] Although the probability of default, as reflected in European senior and subordinated financial CDS indices, has not materially increased since the last Review, for some banks, CDS price developments have been negative. Some evidence points to a higher cost of borrowing (for example, Bloomberg news - Deutsche Bank's Borrowing Premium Doubles From 2015 in Bond Sale) and lower investor appetite (see, for example, The Guardian - Italian banks under pressure as Popolare di Vicenza IPO fails). CoCo bonds are relatively new debt instruments, with equity-like characteristics (i.e., bail-inable or loss sharing), designed to help banks absorb losses at a time of stress and to transfer risk from taxpayers to investors. For a detailed description see Box 6: CoCo bonds: market performance and implications for bank capital and financial stability, MFR 2016:H1.
[5] In the EA, market implied policy rates remain negative for at least 3 years despite some upward revision overall since the time of the last Review (31 May 2016) and a brief fall after the Brexit vote.
[6] In the EA, for example, yields have been partly supported by corporate purchases under the Eurosystem corporate sector purchase programme (CSPP) since June 2016.
[7] A 25 basis point increase in the current fed funds target range of 0.25-0.50 per cent is fully priced for the 14 December FOMC meeting. The pace of tightening beyond that has been revised up since the US presidential elections, with a market implied policy rate of 1.39 per cent in two years' time as at 8 December 2016 compared to 0.84 per cent on 7 November and 1.07 per cent at the time of the last Review (31 May 2016).

Chart 6: Euro area financial and corporate indices



Source: Bloomberg, Bank of America Merrill Lynch and Central Bank of Ireland calculations.
Notes: IG is investment-grade corporate. HY is high-yield. Emerging Market is non-financial corporate. Last observation: 8 December 2016.

among firms and households in some EU Member States also pose economic and financial risks.

The potential for the shadow banking system to amplify market shocks remains high, given the increasing interconnectivity, leverage and complexity of this sector. A run on some UK property-related open-ended funds in the aftermath of the Brexit vote (amid uncertainty over UK CRE valuations[8]) and episodes of extreme volatility in foreign exchange markets (including the sterling flash crash in early October[9]) illustrate potential vulnerabilities arising from the sector. A strong increase in global risk premia or adverse economic or policy shocks could lead to fund redemptions and force funds to sell into illiquid markets.

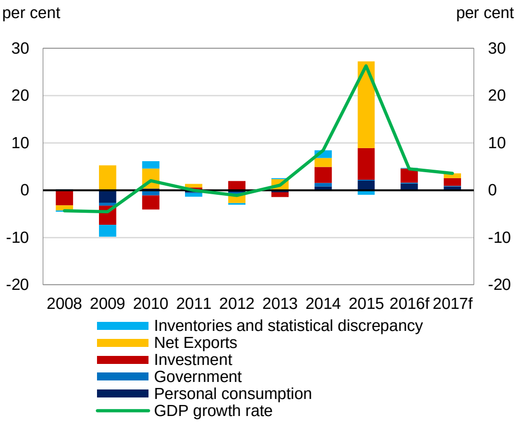
[8] See, for example, Financial Times "Investors pull £3bn from UK property funds since January" 23 October 2016.
[9] See for example, Bank of England Financial Stability Report November 2016, Issue 40, Box 3 "Issues around the sterling flash event" and Bloomberg "Here's What We Know About the Pound's Flash Crash: Quick Take Q&A", October 7 2016.

3. Macroeconomic environment

3.1 Macroeconomic overview

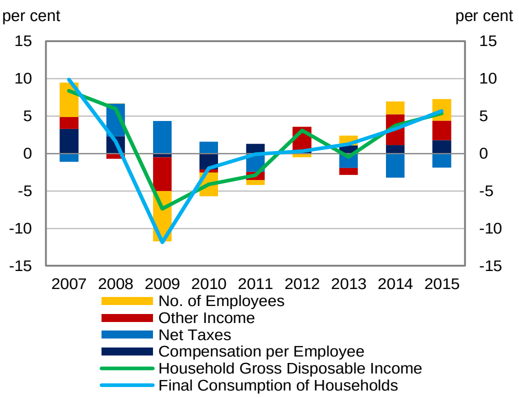
Global growth prospects remain subdued and political uncertainty is elevated. Real GDP growth in Ireland is expected to be 4.5 per cent this year and 3.6 per cent in 2017. Economic activity is occurring against a background of high public and private debt and a susceptibility to external shocks. Downside risks to the macroeconomic environment are predominant over the medium term, largely on account of Brexit, given the extensive linkages between the Irish and UK economies. The impact of Brexit will depend on the nature of agreements reached between the EU and the UK. In the short-term, a negative impact on the Irish economy is expected with the projected growth rate 0.2 and 0.6 percentage points lower in 2016 and 2017, respectively, as a consequence of the UK referendum vote. This arises from a less favourable outlook for Irish exports and the potential for weaker consumer and investor spending.

Chart 7: Composition of GDP growth



Source: CSO and Central Bank of Ireland.
Notes: 2016 and 2017 forecasts from the Central Bank's Quarterly Bulletin No. 4 2016.

Chart 8: Household disposable income growth



Source: CSO and Central Bank of Ireland.

Domestic environment

Since the last MFR, real GDP growth for 2015 was revised upwards to 26.3 per cent by the CSO (in July), from a preliminary estimate of 7.8 per cent (in March).[10] This figure does not accurately reflect economic activity within Ireland as it includes the effects of a very large level shift in capital assets on account of corporate restructuring and reclassifications. Estimates within the Bank point to an underlying growth rate of close to 6 per cent in 2015.[11,12]

The economy is forecast to grow (in GDP terms) by 4.5 and 3.6 per cent in 2016 and 2017, respectively (Chart 7). In nominal growth terms, this translates to increases of 5.4 per cent in both years. The outlook was revised downwards following the UK vote to leave the EU on 23 June. Higher frequency data since the vote convey mixed messages.[13] Consumer sentiment has fluctuated from month to month. The PMI survey data for construction, industry and services indicate higher levels of activity, although sentiment has weakened in recent months. Exchequer data to November 2016 show tax revenues up 6.5 per cent year-on-year (1.8 per cent above profile), while expenditure was up 1 per cent over the same period (and 1.4 per cent below profile). Budget 2017 projected a General Government deficit of 0.9 per cent of GDP for 2016, which seems attainable based on the most recent Exchequer outturns.

Domestic demand (consumption and investment spending) is expected to be the main driver of growth in 2016 and 2017

[10] For a detailed description see Box A: Recent Revision to the National Income and Expenditure Accounts, Quarterly Bulletin No. 3, 2016.
[11] For a detailed description see Box A: An indicator of domestic economic activity in 2015, Quarterly Bulletin No. 4, 2016.
[12] The CSO has set up a high-level group to examine output statistics for Ireland and to identify and develop other growth indicators. This group is to report before the end of the year.
[13] For a detailed description on the effects of Brexit on forecasts see Box B: The Impact of Brexit on the Short-term Outlook, Quarterly Bulletin No. 3, 2016.

(Chart 7). This reflects, in part, the positive outlook for the labour market and incomes (Chart 8) as well as an element of pent-up demand within the economy following the financial crisis. Investment spending is expected to grow strongly given the need for higher levels of housebuilding and other infrastructural and machinery and equipment needs. Consumer price inflation remains subdued, reflecting weak global commodity prices and a strengthening exchange rate.

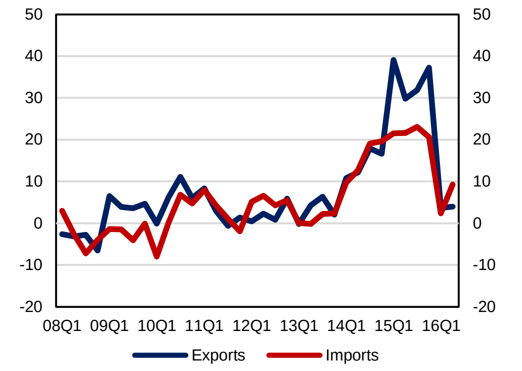
In the labour market, employment numbers are set to increase by 2.6 per cent this year and by 1.5 per cent in 2017. Employment growth has been broadly based across the economy, particularly in construction, industry, accommodation and food services and administrative and support services. Labour force growth has been positive, helped by stronger participation and a return to net inward migration. The unemployment rate, in seasonally-adjusted terms, declined to 7.9 per cent in the third quarter of the year (down from 9.1 per cent over the same period in 2015) and is expected to continue improving in 2017.

The UK's vote to leave the EU will have a negative impact on output, employment and incomes in Ireland. The main channels through which these effects will likely arise are via trade, FDI and the labour market. In the short-term, estimates by the Bank suggest that GDP growth will be 0.2 and 0.6 percentage points lower in 2016 and 2017, respectively, as a consequence of the Brexit vote. Adverse exchange rate movements, coupled with a weaker outlook for foreign demand, could reduce Irish export growth. Heightened uncertainty and financial market volatility could also reduce investor and consumer spending. A significant amount of downside risk remains, reflecting the possibilities of potentially large spillovers to trading partners and more acute confidence effects.

The long-term impact of Brexit will depend on the nature of the withdrawal agreement that the UK agrees with the EU and any specific changes to the free movement of goods, services, capital and labour that occur. Under the most adverse scenario involving higher tariff and non-tariff barriers, Irish GDP could be close to 3 per cent below a no-Brexit baseline after 10 years.[14]

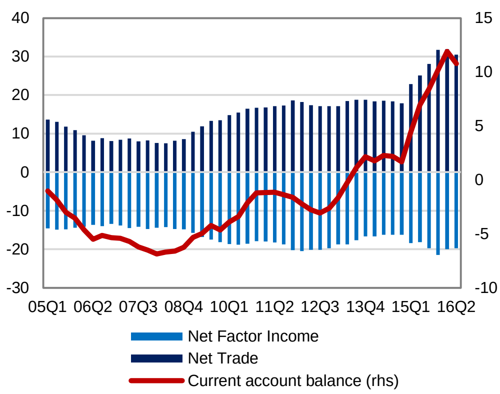
The 0 per cent CCyB rate currently in effect on Irish exposures primarily reflects aggregate credit conditions remaining relatively subdued.[15] Non-financial private sector credit continues to record negative growth rates, as has been the case since late-2009. As of 2016Q3, the year-on-year rates of credit growth to the household and NFC sectors were -2 per cent and -6 per cent, respectively. Underlying the aggregate growth rates, however, a pickup in new lending is now evident. In addition, some sub-segments of the market (e.g. consumer credit and fixed rate mortgage lending) are seeing increases in credit once

Chart 9: Exports and Imports Growth



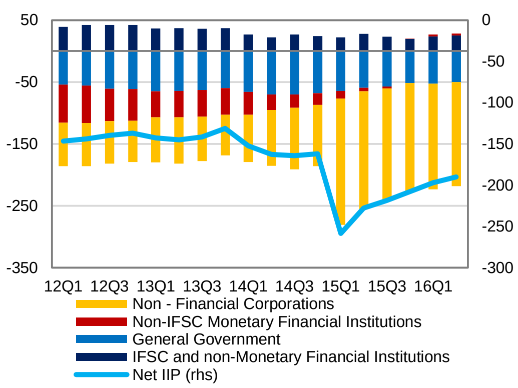
Source: CSO.

Chart 10: Balance of Payments: current account



Source: CSO.
Notes: Data are expressed as four-quarter moving averages. The impact of re-domiciled PLCs is published on an annual frequency with the latest data available for 2015.

Chart 11: Net international investment position



Source: CSO.
Notes: Data are expressed as a percentage of 4-quarter nominal GDP and reflect differences in external financial assets versus liabilities.

[14] For more information see Quarterly Bulletin No. 3, 2016, Box B: The Impact of Brexit on the Short-term Outlook.
[15] Further information on the Central Bank's setting of the CCyB rate can be found on our website here.

again. Credit developments are assessed from a macroprudential perspective on a quarterly basis as part of the Central Bank's setting of the CCyB rate.

External environment

While Ireland's trade performance in 2015 was exceptional, it was inflated by the contract manufacturing activities of a small number of large multi-national firms. Export data for the year point to a weaker growth performance in 2016 (Chart 9). According to the National Accounts data for the first half of the year, exports of goods and services were up 3.8 per cent in annual terms. For 2016 as a whole and looking to 2017, exports are expected to track external demand conditions more closely than in 2015 and to grow by 5.6 and 4.4 per cent, respectively.

Imports were up nearly 6 per cent in the first half of the year (Chart 9), helped by strong growth in services imports. This is likely to reflect mainly the activities of the multinational sector, with a large increase in imports of intellectual property assets occurring. For 2016 and 2017, import growth is projected to ease, albeit still recording strong growth rates of 7.8 and 4.7 per cent, respectively.

The current account surplus jumped to 10.2 per cent of GDP last year reflecting a large rise in the trade balance related to contract manufacturing (Chart 10). This occurred against the backdrop of a large negative level shift in the NIIP reflecting much higher levels of foreign liabilities among NFCs in the first quarter of 2015 (Chart 11). The current account balance is much smaller if corporate restructuring and reclassifications are excluded. The surplus is expected to narrow to 8.1 per cent of GDP in both 2016 and 2017.

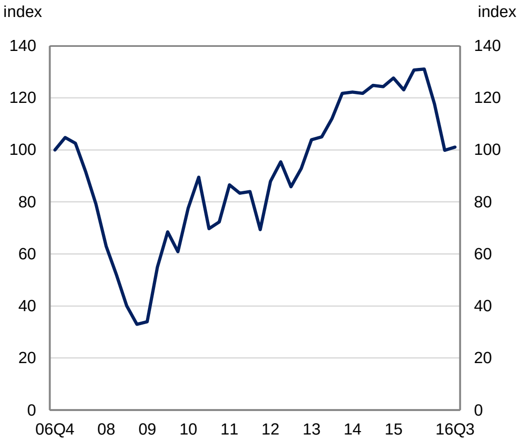
Balance of risks – macroeconomic environment

Downside risks predominate over the forecast horizon relative to the last Review mainly on account of the Brexit vote and uncertainty surrounding the international environment. While its full implications will only become apparent over time, a negative impact on Irish growth, employment and incomes is expected, stemming from weaker foreign demand, sentiment and greater uncertainty. Economic activity in Ireland is also occurring against a background of high public and private debt, while the domestic economy remains susceptible to external shocks. The economy remains susceptible to a sector-specific shock given the concentrated nature of its industrial base. On the fiscal side, while headline deficit and debt ratios have improved, much of this reflects the exceptional denominator effects from the GDP outturn in 2015. While government revenue has grown strongly over the past year, some proportion of the recent rise in taxation (such as in corporation tax) could be short-lived. On the government spending side, the low interest rate environment is helping to restrain overall levels of spending.

3.2 Non-financial corporate sector

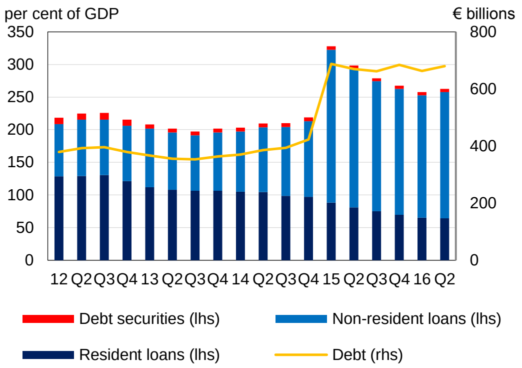
The UK's vote to leave the EU can be expected to pose challenges for the NFC sector. Firms are likely to see a direct impact on trade via weaker foreign demand and a stronger exchange rate against sterling, while a prolonged period of uncertainty during the Brexit negotiation process has the potential to create a drag on investor confidence. The NFC sector in aggregate remains highly indebted, although a large proportion of debt relates to non-resident loans. As well as acting as a drag on firm performance, high indebtedness can leave firms vulnerable to revenue and interest rate shocks. While new lending is rising, overall credit growth remains negative. Total returns on Irish commercial property remain higher than those in other countries. A shortage of supply is becoming evident in the market. While investment activity is strong, it could be affected by Brexit, global economic and financial uncertainty, and investment opportunities elsewhere.

Chart 12: Business sentiment index



Source: KBC Bank Ireland/Chartered Accountants.
Notes: Index base 2006Q4=100. Latest observation: 2016Q3.

Chart 13: NFC Indebtedness



Source: Central Bank of Ireland and CSO.
Notes: Debt is made up of loans plus securities other than shares and is non-consolidated. Last observation: 2016Q2.

Operating environment

Headline figures show both investment and exports grew by over 30 per cent last year, reflecting in part the activities of MNCs. While growth in underlying investment[16] was more modest in 2015, it remained strong at 11.5 per cent.

The outlook for the NFC sector in general has deteriorated since the last MFR with geo-political uncertainty, including that owing to the UK vote to leave the EU, having a negative impact. Business sentiment declined sharply in the first half of the year (Chart 12), before stabilising in Q3. Growth forecasts for investment and exports have been revised down for 2016 and 2017, reflecting the impact of the UK vote.[17]

The overall impact of Brexit remains highly uncertain and poses a substantial downside risk to the NFC sector. Firms are likely to see a direct impact on trade via weaker foreign demand, while a prolonged period of uncertainty as Brexit negotiations take place has the potential to act as a drag on investor confidence. In the longer term, the potential for greater barriers to trade to arise could have a negative impact on the NFC sector.

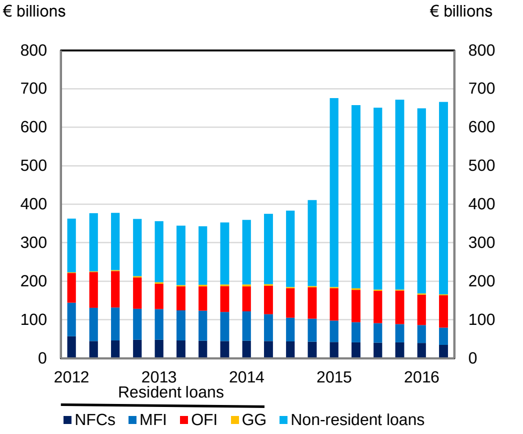
Growth in the manufacturing sector has softened markedly this year following an exceptional performance in 2015. In the first nine months of this year, manufacturing output was flat on a seasonally-adjusted basis. The modern sector, which is heavily influenced by multinationals, has shown moderate growth (albeit following very large gains in 2015), with output up one per cent. Output in the mainly indigenous traditional sector was down 1.4 per cent over the same period. This sector appears more vulnerable to adverse effects from Brexit due to its significant linkages with the UK market.

Financial position

Analysis of the NFC sector is complicated by the activities of a

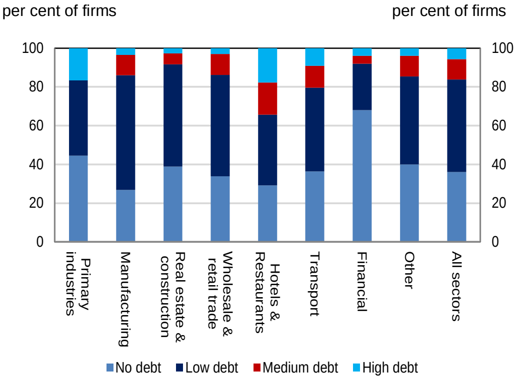
[16] Underlying investment refers to investment excluding intangibles and aircraft.
[17] See Central Bank of Ireland Quarterly Bulletin 4 2016

Chart 14: Breakdown of NFC loans



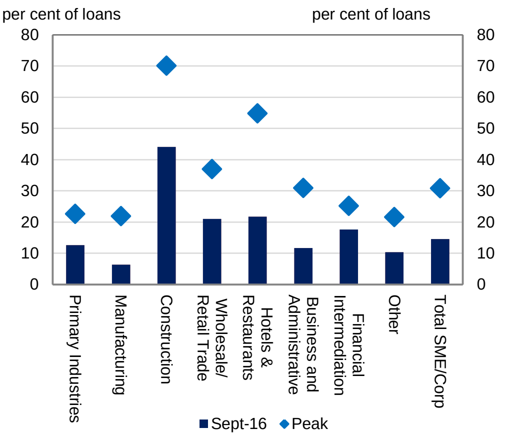
Source: Central Bank of Ireland.
Notes: Debt is made up of loans plus securities other than shares and is non-consolidated. GG is General Government. Last observation: 2016Q2.

Chart 15: SME indebtedness by sector



Source: Department of Finance SME Credit Demand Survey and Central Bank of Ireland calculations.
Notes: Firm indebtedness is based on debt-to-turnover ratio. Low debt<0.33, medium debt 0.33-1, high debt >1. Data relate to period October 2015-March 2016.

Chart 16: SME/Corporate NPLs



Source: Central Bank of Ireland.
Notes: Data relate to the 5 Irish retail banks. Loans classified as non-performing as a share of total loans outstanding. The date of the peak level of NPLs differs by sector. Total SME/Corporate NPLs peaked in 2013Q3. Last observation: 2016Q3.

comparatively small number of large MNCs which have a substantial impact on the aggregate data. Corporate restructuring undertaken by these entities in recent years has had a significant impact on both the numerator and denominator of the NFC debt-to-GDP ratio. As of 2016Q2, the aggregate NFC debt-to-GDP ratio was over 260 per cent (Chart 13), placing the NFC sector in Ireland among the most indebted in Europe.

Non-resident loans (i.e., loans issued by non-resident entities) now account for 75 per cent of NFC debt (Chart 14). This element of NFC debt, arising from MNC activities, increased substantially between 2014 and 2015. As discussed in the last Review[18], this debt is likely to have more limited links to the Irish economy than loans between domestic Irish counterparties. On the other hand, NFC loans issued by resident entities have been declining. Resident NFC loans have fallen from €230 billion in 2012 to less than €170 billion in 2016Q2 (Chart 14). NFC loans issued by resident MFIs, which now amount to €45 billion, have seen a particularly large decline, halving in value since 2012. Part of this decline, however, is attributable to changes in the MFI reporting population and the sale or transfer of assets that occurred during this time.

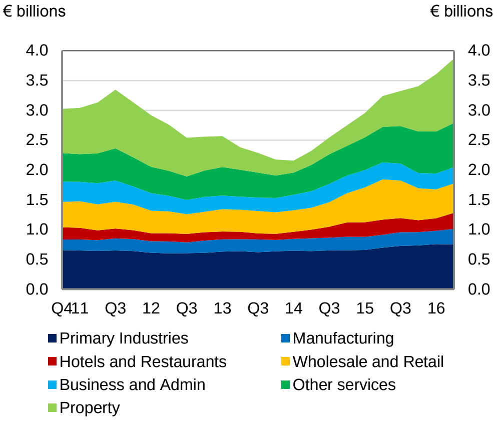
At a firm level, the financial position of SMEs varies significantly. Survey data[19] point to about one-third of SMEs not holding debt, for example, while about 5 per cent are highly indebted (Chart 15).[20] There is variation in debt levels across sectors. In the hotels and restaurants and primary industry sectors, a relatively high proportion of firms hold debt in excess of turnover.

High indebtedness leaves firms vulnerable to a decline in revenues or increase in interest rates.[21] The overall level of SME/corporate NPLs has halved since its peak in 2013Q3. There is considerable variation in the level of NPLs across sectors (Chart 16). Over 40 per cent of construction-related lending, for instance, is still classified as non-performing whereas the corresponding figure for manufacturing loans is 6 per cent. NPL rates have fallen over time across all sectors as both banks and firms work through the after-effects of the financial crisis. Nevertheless, with almost 15 per cent of SME/corporate loans still classified as non-performing, the workout of these loans will require sustained effort for some time to come.

High indebtedness can also act as a drag on a firm's activity by limiting its ability to access new finance and/or undertake new investment opportunities. The CSO Access to Finance survey found that the majority of firms carrying outstanding property-related debt considered it to be an obstacle to business performance.[22]

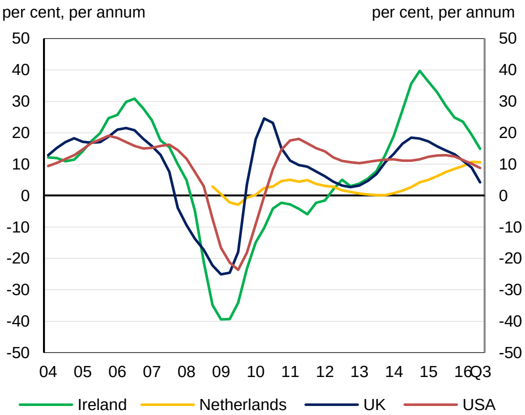
[18] See Box 1 The components of NFC debt in Central Bank of Ireland Macro-Financial Review 2016 I
[19] Department of Finance SME Credit Demand Survey October 2015-March 2016
[20] A firm's indebtedness is based on their debt-to-turnover ratio as outlined in McCann, F. "Profiling the indebtedness of Irish SMEs." Central Bank of Ireland Economic Letter 2014 3.
[21] A recent IMF Working Paper (*Corporate Sector Vulnerabilities in Ireland, WP/16/211, November 2016*) looks at the impact of such a shock on the financial health of the Irish NFC sector.
[22] CSO Access to Finance, 2014

Chart 17: Gross new lending to SMEs



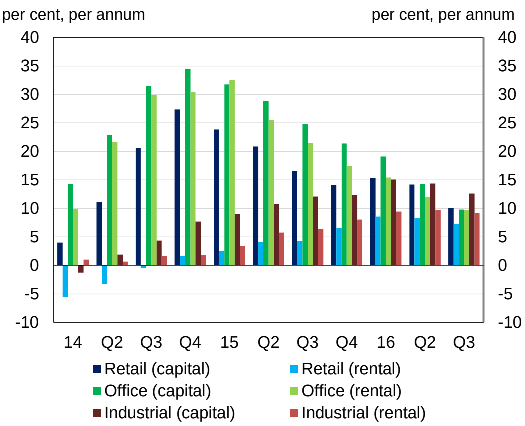
Source: Central Bank of Ireland.
Notes: Chart shows the rolling 4-quarter total of gross new lending by banks to Irish resident SMEs excluding financial intermediation. Last observation: 2016Q2.

Chart 18: Total returns across international commercial property markets



Source: MSCI/IPD.
Notes: Data are annual returns in local currency.

Chart 19: Commercial property capital and rental value growth by sector



Source: MSCI/IPD.

Financing conditions

The bank credit environment faced by NFCs remains subdued. Credit growth remains negative, declining by a year-on-year rate of approximately 5 per cent in October 2016. The cost of credit on new NFC loans in Ireland has been relatively stable in recent months and remains relatively high in comparison with interest rates in other Member States.

Ongoing negative credit growth to the NFC sector reflects loan repayments, driven by SMEs, continuing to outpace new lending. Differences in the flow of credit to SMEs compared with large enterprises are evident. Large enterprises are now net borrowers, having returned to positive rates of credit growth while, across most sectors of the economy, SMEs continue to repay more than is being drawn down.[23]

Although the net flow of credit to SMEs remains negative, new lending continues to strengthen. Gross new lending to SMEs reached its highest level in 2016Q2 since the data series began in 2010 (Chart 17). Lending in that quarter amounted to €1.1 billion, while cumulative lending over the twelve months to end-2016Q2 amounted to almost €4 billion. An increase in new property-related lending has occurred and it is now the largest component of new loans, accounting for almost 30 per cent of the total in the first half of the year. New lending to the hotels and restaurants sector and the other services sector also experienced large increases in the second quarter, albeit from relatively smaller bases. The average interest rate on new (non-financial) SME drawdowns has declined in recent quarters and was 4.1 per cent in 2016Q2.

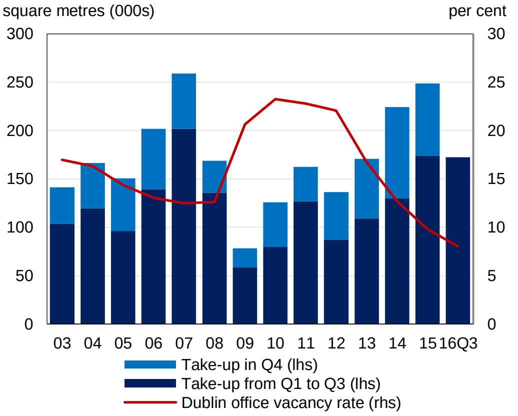
SMEs tend to rely heavily on banks for finance. In the aftermath of the financial crisis, part of the policy response was to provide SMEs with a more diversified and sustainable range of finance options. The SBCI, which provides finance through both bank and non-bank lenders, was one such initiative. As of June 2016, the SBCI had provided €347 million to over 8,500 firms.[24] The Microenterprise Loan Fund Scheme provides another non-bank source of finance for microenterprises. In the first half of 2016, it provided loans of €2.2 million.

Commercial property

Total returns[25] on Irish commercial property have continued to decline in 2016, but remain higher than those in other countries (Chart 18). According to MSCI/IPD data, capital values rose 9.8 per cent year-on-year at end-2016Q3, down from 21.8 per cent at end-2015Q3. All three commercial property sub-sectors (retail, office, industrial) contributed to the strong capital growth, with industrial recording the largest increase (Chart 19). Overall

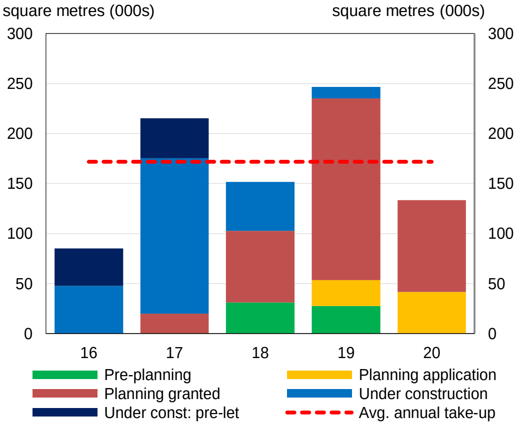
[23] The electricity, gas, steam and air conditioning supply sector, which is a small sector in terms of outstanding credit, has seen positive year-on-year growth in recent quarters. Also, in 2016Q2 credit growth to the construction sector turned positive (albeit marginally) at 0.3 per cent year-on-year.
[24] Strategic Banking Corporation of Ireland, press release 21/07/2016
[25] Total returns are an indicator of overall investment performance. It takes account of both capital and rental elements of a property's value, and is calculated by MSCI/IPD as the percentage capital value change plus net income accrual, relative to capital employed.

Chart 20: Dublin office market activity



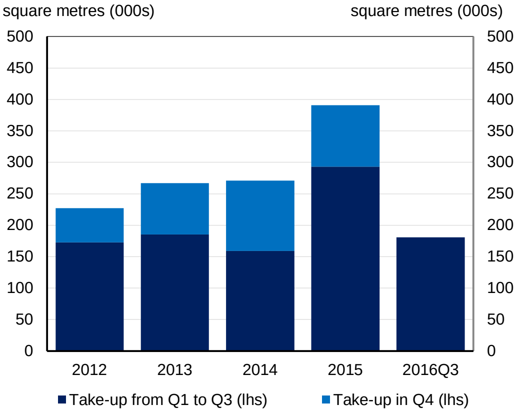
Source: CBRE research and Central Bank of Ireland calculations.
Notes: Dublin office vacancy refers to the average of the available end-quarter data from the year in which they relate.

Chart 21: Expected Dublin office supply pipeline



Source: CBRE Research
Notes: Data as at 2016Q3 are a projection based on the assumption that every scheme in the planning process materialises. A number of these schemes may not materialise or may not proceed at the pace envisaged at present. Average annual take-up is based on data from 2003 to 2015.

Chart 22: Dublin Industrial market



Source: JLL.
Notes: Data on the number of sales and letting transactions from before 2013 is not available.

capital values have increased by almost 70 per cent since the bottom of the market in mid-2013, but are still 45 per cent below their previous peak (at end-2007). Rental values continue to grow steadily, up 9 per cent in the past year. The office sub-sector had the largest rental increase (9.7 per cent) followed by industrial (9.2 per cent) and retail (7.2 per cent) (Chart 19).

A pickup in the office sub-sector has been an important part of the commercial property market recovery. Increased economic activity and a steady flow of foreign direct investment into Ireland have contributed to the strong demand for office accommodation, particularly in Dublin.[26] CBRE reported that 172,000m^2 of office space was leased during the first three-quarters of 2016 (Chart 20), which is almost 44 per cent higher than the average take-up in the equivalent quarters from 2003 to 2015. Strong demand and an absence of new development and refurbishment until recently have seen office vacancy rates in the Dublin city decline sharply in the post-crisis period, from 24 per cent in 2010 to 8 per cent at the end of 2016Q3 (Chart 20). This is the lowest vacancy rate on record and well below the European average (JLL (2016)).[27] The low supply of office space is having a direct impact on Dublin office rents, with CBRE forecasting a further increase in prime rents to €673 per square metre by the end of the year, from €619 in 2016Q1.

While a low office supply in Dublin is evident at this time, the resumption of development activity can be expected to deliver the equivalent of two to three years average annual take-up out to end-2019 (JLL (op. cit.)).[28] Building activity is underway on a number of office developments across the city, with further schemes ready to commence or in the planning pipeline. These should provide a greater supply of office accommodation within the next few years (Chart 21).

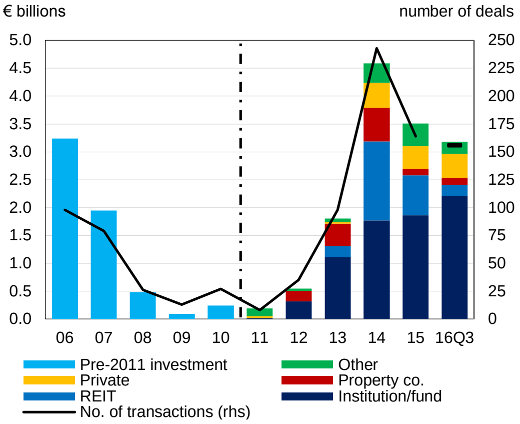
A shortage of good quality, well-situated stock is becoming more evident in the industrial and retail commercial property sectors. While take-up of industrial space in Dublin for the first nine months of 2016 was approximately half the equivalent 2015 level (Chart 22), this may be due more to the severe shortage of suitable premises in core locations than to a weakening in the demand for accommodation.[29] With only one large industrial scheme under construction in the capital at the moment, the shortage of supply may drive industrial rents higher over the medium term.

Investment and financing activity

Following a year of substantial investment activity in 2015, a further €3.2 billion worth of transactions occurred in the Irish commercial property market in the opening nine months of 2016

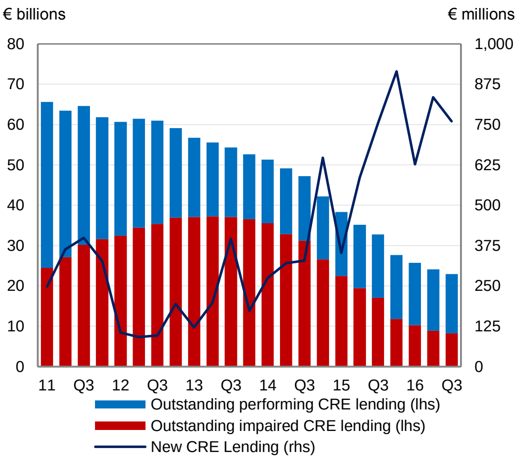
[26] Analysis of the CRE sector in the Macro-Financial Review focuses predominantly on the Dublin market, reflecting, in part, data limitations with coverage of regional CRE markets tending to be poor. There is a need for more detailed, independent information on both a national and regional basis. The Central Bank is involved in a project with NAMA and the CSO which aims to create a commercial property statistical system (CPSS) for Ireland, which would see the collection and publication of CRE data in areas such as stock, sales, leases and planning. It is hoped that initial results will be published in 2018.
[27] See JLL Report, "Perspective: Dublin Office Pipeline" (2016)
[28] According to a recent CBRE Report, "Dublin will have enough stock to meet Brexit demand", the equivalent of 2 years average Dublin city-centre office supply is currently under construction.
[29] See CBRE, "Ireland's Bi-Monthly Research Report." September 2016.

Chart 23: Sources of Irish commercial property investment expenditure



Source: CBRE Research
Notes: 2016 data as at end-September. Investment spending relates to individual transactions worth at least €1 million. Breakdown by the original source of funding is only available from 2011.

Chart 24: Irish retail banks' new CRE lending



Source: Central Bank of Ireland.
Notes: Data are consolidated.

(Chart 23). Two-thirds of that investment took place in the second quarter, making it one of the busiest on record.[30] Looking ahead, while the CRE market is well-positioned to benefit from any increase in occupier/investor demand post-Brexit, it is also left vulnerable by Ireland's economic links to the UK and the geopolitical and capital market uncertainty which Brexit has created. In addition, as NAMA and the banks reach the end of their deleveraging schedules, average lot sizes are likely to be smaller.

Large international funds and REITs have been amongst the most active investors in the Irish property market, attracted by the prospect of capital gains and rental growth and the opportunity to diversify risk. Non-resident institutional investors hold significant stakes in the Irish-listed REITs operating here at present[31], with US, UK and Canadian investors featuring prominently according to published financial statements.[32] This source of investment could be influenced by global economic and financial uncertainty and investment opportunities elsewhere.

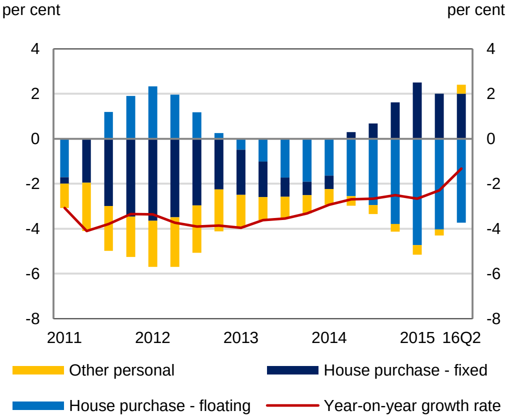
Despite a substantial deleveraging process, loan write-offs and amortisation, Irish retail banks continue to hold a large portfolio of commercial property on their balance sheets (circa €23 billion at the end of 2016Q3), 36 per cent of which is non-performing (Chart 24). Since the financial crisis, Irish banks have had a relatively limited role in the funding of commercial property-related activity. While new lending activity from the domestic banks to the CRE sector has been rising steadily since 2013, it is still relatively subdued and tends to be for investment in existing buildings and for pre-lets rather than speculative new builds. There was approximately €760 million in new CRE lending in 2016Q3, which equates to approximately 3.5 per cent of the total stock of outstanding CRE lending or about 12 per cent of the Irish retail banks' total new lending for the quarter.[33] Even though domestic banks are not heavily engaged in providing significant amounts of new CRE lending at present, the condition of their existing commercial property loan book leaves them vulnerable to a downward adjustment in prices, and any subsequent increase in provisions. Conversely, if returns in the CRE sector remain at high levels, some institutions may be tempted to behave less prudently in an effort to boost profits. While some recovery in commercial property lending may be desirable in order to help address the current supply deficit, mispriced or excessively risky loans could prove destabilising.

[30] It is worth noting that four large deals of over €80 million accounted for c.68 per cent of the value of these transactions.
[31] A fourth REIT, listed in the US, has also acquired a number of commercial and residential property assets throughout 2015.
[32] For more on the REIT sector in Ireland see Box A: Real Estate Investment Trusts and the Property sector in Ireland, page 33, Central Bank of Ireland Quarterly Bulletin 2 2016.
[33] These figures are relatively similar to the picture in 2015Q3, when new CRE lending represented 12 per cent of all new lending and was equivalent to 2.3 per cent of the value of outstanding CRE loans.

3.3 Household sector

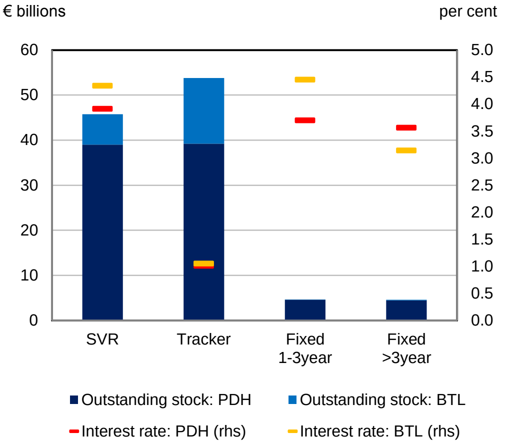
The high level of debt held by the household sector, much of which is at variable rates, leaves the sector vulnerable to the effects of an income shock or increases in interest rates. Those households in the 35-44 age cohort are relatively highly indebted while those with tracker mortgages are benefitting from the current low policy rates. While the outlook for the labour market remains broadly positive, a more negative than expected impact from Brexit could act as a drag on employment and consumer sentiment. Residential property prices and rents continue to rise. Supply shortages are a feature of the market and are expected to persist over the medium term.

Chart 25: Household credit – contributions to year-on-year change



Source: Central Bank of Ireland.
Notes: Floating/variable rate house loans include fixed rate mortgages up to one-year. Last observation: 2016Q2.

Chart 26: Outstanding stock of lending for house purchase



Source: Central Bank of Ireland.
Notes: Lending volumes incorporate loans held on balance sheet by Irish resident credit institutions and securitised loans serviced by these institutions. Interest rate data relate only to on-balance sheet loans. SVR stands for standard variable rate and includes fixed loans with a maturity of less than 1 year. Data relate to 2016Q2.

Credit and economic developments

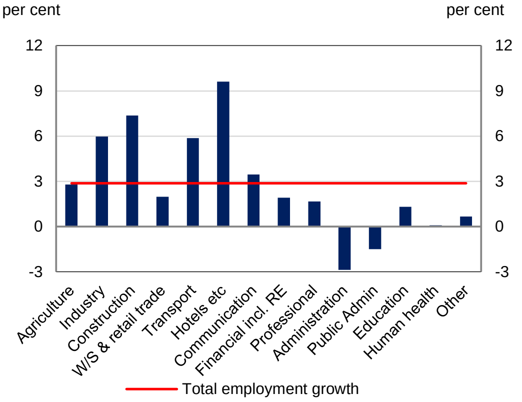
There are signs of an improvement in the household credit market with data now showing year-on-year increases in both other personal (i.e. non-mortgage) credit[34] and fixed-rate mortgage lending. Overall household credit growth, however, remains negative (Chart 25) as floating/variable-rate mortgage lending – which is the largest component of household lending – continues to decline.

Households held almost €110 billion of mortgage debt at end-2016Q2 (Chart 26).[35] Most of those loans, close to €100 billion, with a 45:55 split between SVR and tracker rates, have variable interest rates. The household sector then remains vulnerable to interest rate increases which would put upward pressure on the associated debt servicing cost. Reflecting the current official ECB rate, tracker rates are particularly low at present and likely to be supporting households' debt service capability.

Strong employment growth in the first half of the year saw the number of persons employed rise above two million for the first time since 2009. Positive employment developments are evident across the economy with most sectors recording employment increases on an annual basis as of 2016Q3 (Chart 27). Strong labour force growth, including the effects of a return to net inward migration, slowed the rate of decline in the unemployment rate, in particular during 2016Q2. However, overall unemployment continues to fall. With growth in employment and compensation per employee expected to continue, albeit at a more moderate rate for the former in 2017, the outlook for the labour market remains positive. Nevertheless, a worse than expected economic outcome, resulting, for example, from a more negative impact from Brexit than currently anticipated, has the potential to weigh on employment and consumer confidence.

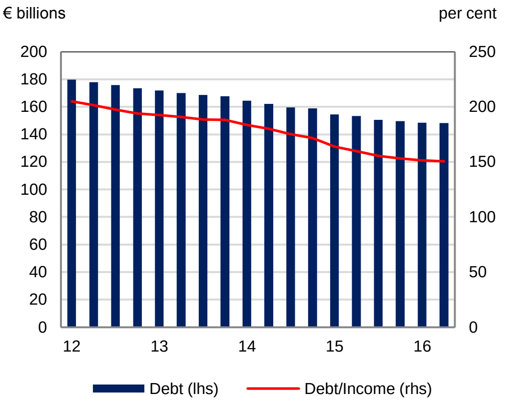
[34] The pick-up in the consumer credit element of non-mortgage credit has mirrored a pickup in spending on consumer durables, including cars, furniture and electrical goods – See Box B: Developments in Consumer Credit – Evidence from Money and Banking Statistics, Central Bank of Ireland Quarterly Bulletin October 2016.
[35] Relates to debt serviced by Irish resident banks.

Chart 27: Employment growth by sector



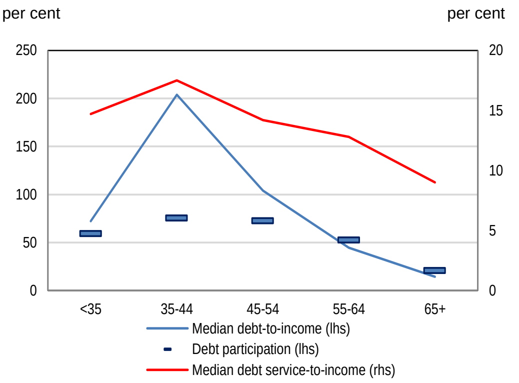
Source: CSO and Central Bank calculations.
Notes: Growth in employment is the year-on-year percentage change in the number or persons employed (on a seasonally adjusted basis) in a sector. Data relate to the 12 months to 2016Q3.

Chart 28: Household debt



Source: Central Bank, CSO and Central Bank calculations.
Notes: Debt comprises bank loans. Income is total household disposable income i.e. gross disposable income plus an adjustment for the change in pension entitlements. Last observation: 2016Q2.

Chart 29: Household debt burden by age cohort



Source: Household Finance and Consumption survey, CSO.
Notes: Debt participation refers to the proportion of households within each age cohort that hold debt. Medians are based only on those households who hold debt. Income is gross income. Data relate to 2013.

Financial position

Notwithstanding the reduction in it that has occurred in recent years, the level of debt held by the household sector in Ireland remains a source of vulnerability (Chart 28). The household sector has been deleveraging in recent years with household debt falling to its lowest level in a decade in 2016Q2. The decline in the level of debt is reflected in measures of debt sustainability such as the debt-to-income ratio – which is now 150 per cent, having peaked at 215 per cent in 2011Q2 – and the debt-to-total assets ratio, which is now around 19 per cent having been over 25 per cent in 2012/13.[36]

Nevertheless, high debt leaves the sector exposed to a decline in income or increases in interest rates. Any such developments could place stress on the debt-servicing capacity of the sector and could have broader implications for the economy if households were forced to reduce spending. Credit providers could also be affected if households were unable to meet their debt servicing obligations.

Indebtedness varies across households (Chart 29). As illustrated by the Household Finance and Consumption Survey (2013)[37], the distribution of household debt is uneven. Over 40 per cent of households, for example, did not hold any debt at the time of the survey. Those households in the 35-44 age bracket are relatively highly indebted (Chart 29).[38] Analysis undertaken by the IMF as part of the recent FSAP shows that in general younger borrowers are more vulnerable to a hypothetical future shock than older borrowers.[39] Other cohorts that were found to be more vulnerable to a shock are first-time buyers, and, to a lesser extent, those on SVR mortgages.

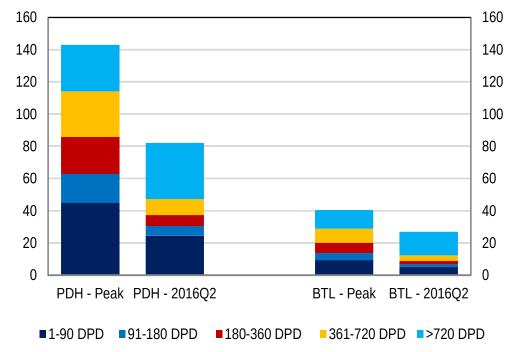
Mortgage arrears and debt resolution

Most household debt relates to mortgages.[40] Hence, from a financial stability perspective, there is a lot of focus on this component of household debt. The number of mortgage arrears cases continues to fall, with most categories now seeing consistent declines. There were approximately 82,000 PDH mortgages in arrears at end-2016Q2, a decline of over 40 per cent from 2013Q2 (Chart 30). The largest share of the remaining cases (about 35,000 loans), however, are more than 720 days in arrears. A similar picture is evident in BTL mortgage arrears cases, where over half of the 27,000 cases outstanding as of 2016Q2 are in very long-term arrears.

About 30 per cent of the mortgages in arrears as of 2016Q2 had received a restructure.[41] Of the mortgage accounts that have received a restructure at some point, of which there have been

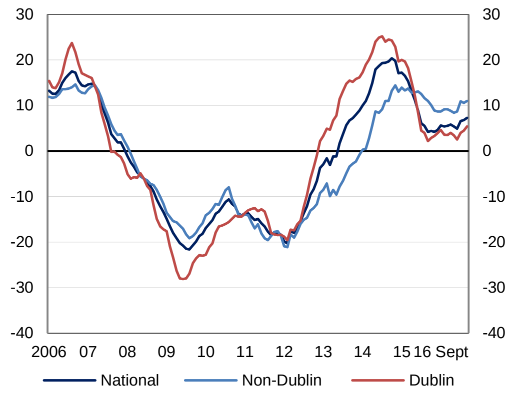
[36] Increases in incomes and asset values have also contributed to the decline in these indicators of debt sustainability.
[37] Household Finance and Consumption Survey, 2013
[38] Lawless, M., Lydon, R., & McIndoe-Calder, T. "The Financial Position of Irish Households." Central Bank of Ireland Quarterly Bulletin, 2015.
[39] Ireland, FSAP – Technical Note: Nonbank sector stability analyses
[40] Based on the CSO Household Finance and Consumption Survey (2013), non-mortgage debt accounts for 6 per cent of total household debt. Statistical data published by the Central Bank suggests that as of August 2016, 87 per cent of the value of loans outstanding to Irish resident households was for house purchase.
[41] The figure is 33 per cent for PDH arrears cases and 24 per cent for BTL arrears cases.

Chart 30: Number of mortgage arrears cases



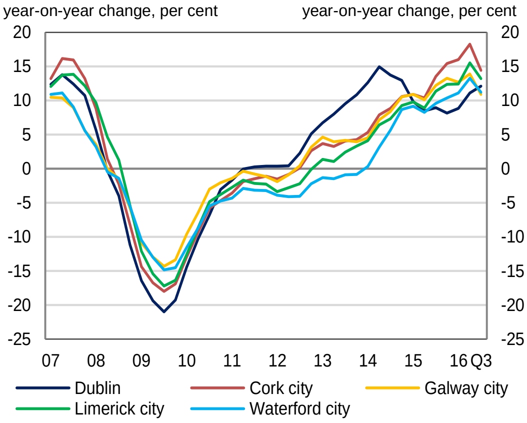
Source: Central Bank of Ireland.
Notes: PDH – primary dwelling house. BTL – buy-to-let. DPD – days past due. Peak in PDH and BTL arrears cases refers to 2013Q2 and 2013Q3 respectively. Last observation: 2016Q2.

Chart 31: Residential property price growth



Source: CSO.

Chart 32: Daft.ie regional residential rents



Source: Daft.ie

over 160,000, more than three-quarters are no longer in arrears and almost 90 per cent are meeting the terms of the new arrangement. (See Box 1 for a discussion of the default and modification status of PDH loans.)

There will be cases where restructuring will be insufficient or inappropriate and loss of ownership of the property will be the necessary outcome to the process. The number of repossessions is now running at about 2,500 on an annual basis, split about 60:40 between PDH and BTL mortgages. Of the total number of repossessions, about one half is due to voluntary surrender with the other half arising from a court order.

Other initiatives to facilitate the resolution of household debt issues continue to come on-stream. In October, the Government launched the mortgage arrears resolution service "Abhaile".[42] The scheme aims to help those who, arising from difficulties in paying their debts, are at risk of losing their home by providing access to free, independent expert financial and legal advice and support. This followed a range of modifications to bankruptcy and personal insolvency procedures which have come into effect during the past twelve months. The amendments, which were provided for in the Bankruptcy (Amendment) Act 2015 and the Personal Insolvency (Amendment) Act 2015, included a reduction in the bankruptcy term from three years to one year and the introduction of a court review option for PIA proposals. There were almost 350 bankruptcy adjudications in the first nine months of 2016 and about 180 PIAs per quarter are being approved.

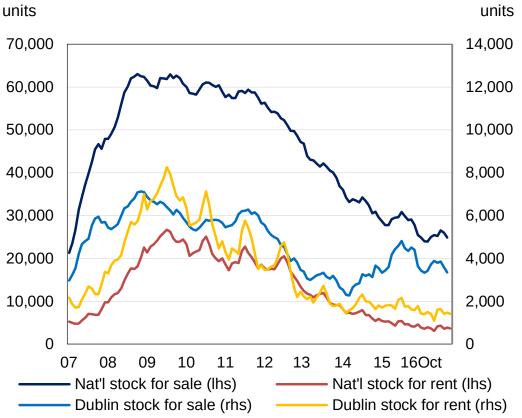
Residential property prices and rents

The CSO launched its new Residential Property Price Index (RPPI) in September 2016. In contrast to its predecessor, which was based on mortgage transactions only, the new index also takes account of non-mortgage house purchases. (Box 2 considers the new CSO RPPI in greater detail.) According to it, the rate of residential property price inflation has increased in recent months. National residential property prices rose by 7.3 per cent year-on-year to September (Chart 31). The annual rate of house price inflation in Dublin was 5.4 per cent. Outside Dublin, house prices have grown more strongly, up 11 per cent since September 2015, although this does mask some regional variability.

MyHome.ie and Daft.ie have reported a pickup in asking prices in the second and third quarters of 2016. Results from the Central Bank of Ireland/SCSI 2016Q3 Quarterly Property Survey also point to an increase in median house price expectations over the coming twelve months (see Box 3). Rising disposable incomes, increasing household formation, supply shortages and strong rental growth can be expected to exert upward pressure on residential property prices over the medium term.

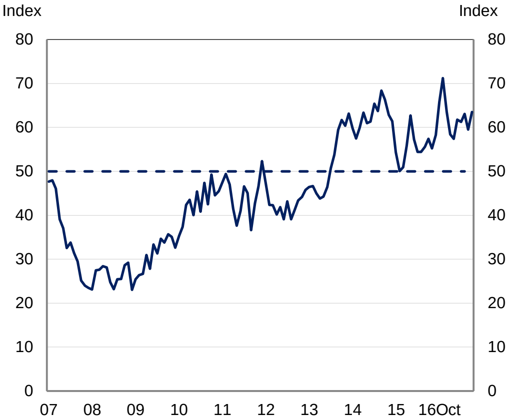
[42] See MABS for more information.

Chart 33: Stock listed for sale or rent on Daft.ie



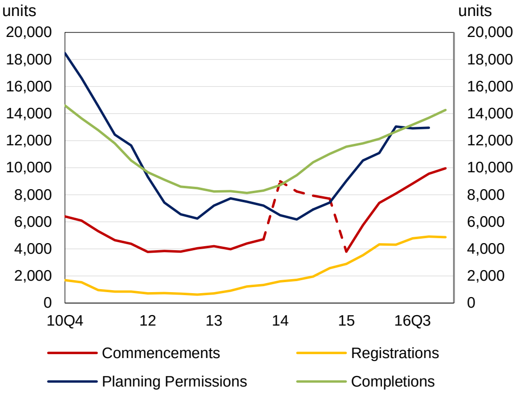
Source: Daft.ie.

Chart 34: Ulster Bank PMI: Housing Activity



Source: Ulster Bank.
Note: 50 = no change on previous month

Chart 35: Residential construction activity: (Rolling 4Q total)



Source: CSO and Department of Housing, Planning, Community and Local Government.
Note: The adoption of new building codes from March 2014 resulted in a significant front-loading of commencements in the first quarter of 2014, the impact of which remained in the statistics until 2015Q1. This period is represented by the jagged red line. Latest observations 2016Q3, except for planning permissions data, for which 2016Q2 data are the latest available.

Strong rental growth continues to be a feature of the residential property market. Nationally, private rent inflation, as measured by the CSO, has averaged about 9 per cent per annum over the past three years. Average rents in October 2016 were more than 11 per cent higher than their previous peak level (in 2008). According to Daft.ie, average monthly (asking) rents in Dublin increased 12.1 year-on-year in 2016Q3 (Chart 32), taking the cumulative increase since the end-2010 low-point to almost 60 per cent.[43] Increases in rental costs are also particularly strong in counties neighbouring Dublin, and in the other main cities. Rents in Cork city were up 14.4 per cent year-on-year in 2016Q3 (Chart 32).

A fall in the availability of rental properties across the country has occurred. In October 2016, the number of units listed for rent on Daft.ie was down 12 per cent on a year earlier and by over 85 per cent since 2009 (Chart 33). The situation in Dublin is particularly acute, with approximately 1,400 units on offer through Daft.ie in October 2016. This drop in the availability of rental units has occurred despite a substantial addition to the stock of properties in the private rental sector. Research by McCartney (2016) estimates that 24,000 units were added to the private rental sector since 2011 but that demand has outstripped this additional supply.[44]

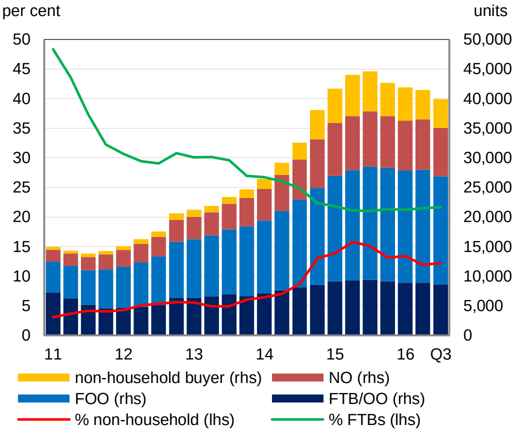
Housing supply and residential construction activity

A shortage of housing supply is a feature of the Irish residential property market. Data from both MyHome.ie and Daft.ie indicate a lower number of second-hand stock for sale on their websites in 2016 compared to last year. Fewer than 25,000 units were offered on Daft.ie in September 2016, down 14 per cent on the September 2015 figure, and from a high of 63,000 properties in late-2008 (Chart 33). There were 3,300 units for sale in Dublin, 23 per cent lower than a year ago and less than half the end-2008 figure. Property-turnover-time is also falling, with almost one-third of houses listed on the Daft.ie website selling in under-two months, up from one-fifth at the start of 2013, and the average time to sale agreed on MyHome.ie properties falling to a new low of four months in 2016Q3.

Despite recent signs of expansion, supply continues to lag behind demand in the residential property market. Construction activity has been strong of late, with increases in purchasing and employment according to the Ulster Bank PMI. The housing activity index has remained above the "no-change" 50 mark since the last Review (Chart 34). The pickup in homebuilding is evident in the latest national new house completions data. The number of units added to the housing stock in the four quarters to end-2016Q3 was 17 per cent higher than the equivalent

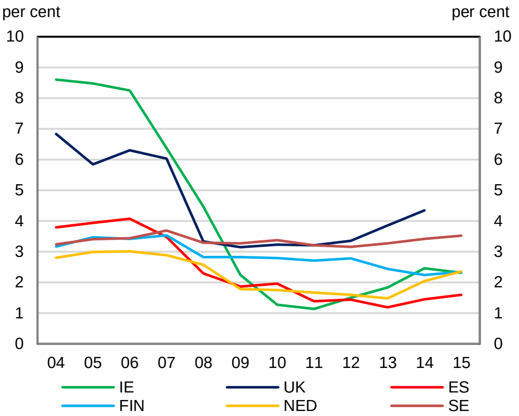
[43] For a more in-depth discussion on developments in regional rental markets see McCann, F., (2016), "Exploring developments in Ireland's regional rental markets", Central Bank of Ireland, Economic Letter, Vol. 2016, No. 13
[44] McCartney, J. (2016). "A rent forecasting model for the privately rented sector in Ireland."

Chart 36: Residential property transactions by purchaser type



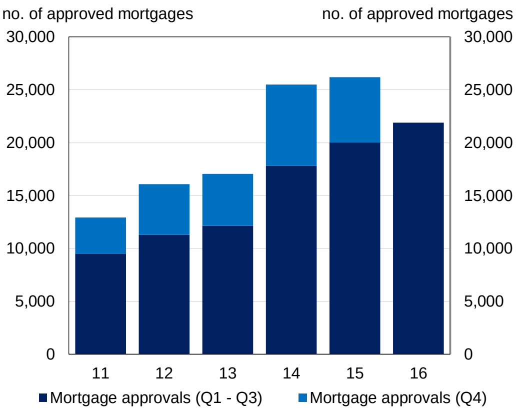
Source: CSO.
Notes: Data refer to rolling four-quarter average. FTB/OO = first-time buyer/owner occupier, FOO = former owner-occupier, NO = non occupier / buy-to-let. Non-household buyers include REITs and property funds.

Chart 37: Cross-country residential property transactions as a percentage of housing stock



Source: European Mortgage Federation (Hypostat) and Central Bank of Ireland calculations

Chart 38: Mortgage approvals



Source: BPFI.

2015Q3 figure (Chart 35). Total new-builds for 2016 and 2017 are expected to reach 14,000 and 16,000 units[45], respectively, up from 12,666 last year. Even so, the rate at which new-builds are coming on-stream is low by historical comparison and still well-short of that required to satisfy a projected demand of circa 25,000 units per annum to 2030.[46] It is possible that pressure on the housing supply will be even greater in the years ahead, given CSO figures showing a return of net inward migration to Ireland last year, for the first time since 2009.

Forward-looking indicators of residential construction activity, such as registrations and commencements, have also been higher of late (Chart 35), but, again, not to the extent required to address housing demand. The latest cumulative four-quarter residential property planning permissions, guarantee registrations and commencements data were up substantially from a year previously, to 13,000, 4,900 and 9,700 units respectively.[47]

Residential housing transactions and the mortgage market

Sales activity in the residential property market has been weakening for much of the past 12 months. According to newly-released data from the CSO based on stamp duty returns to the Revenue Commissioners, just under 40,000 residential property transactions occurred in the four quarters to end-September 2016, about 10 per cent lower than a year previously (Chart 36). TEGoVA (2012)[48] suggests that a well-functioning housing market should see 3 to 4 per cent of its stock turnover each year. According to European Mortgage Federation data and notwithstanding structural differences across countries, Ireland and some other European countries are below this level (Chart 37).[49] Exceptions include the UK and Sweden whose latest turnover rates were 4.3 and 3.5 per cent, respectively.

Cash/non-mortgage buyers remain quite active in the residential sales market, accounting for about half of the residential properties purchased in Ireland since 2012.[50] This is high relative to peers such as the UK, where about one-third of homes are paid for in cash.[51] CSO data indicate that the market share of first-time buyers has decreased in recent years (Chart 36). In general, there has also been an increase in the proportion of non-household purchasers, including foreign private equity firms and REITs, both of which have been particularly active in Dublin.

Mortgage activity increased strongly in the third quarter of 2016. BPFI figures show that 6,900 mortgages were drawn-down for

[45] See Central Bank of Ireland Quarterly Bulletin 4 / October 2016. In the first 9 months of 2016, 10,500 new units were completed.
[46] Duffy, D., Byrne, D., and Fitzgerald, J. "Alternative scenarios for household formation in Ireland." ESRI Quarterly Economic Commentary.
[47] Commencement and registration data are available up to 2016Q3, whereas the latest planning permission data are for 2016Q2. A number of initiatives aimed at facilitating the necessary increase in housing supply have been announced over the past year or so; such as the Government's Action plan for housing and homelessness , released in July 2016, it contains a series of initiatives to help housing output reach 25,000, by 2020. In addition, plans to reform building regulations and measures to enhance the viability of residential construction activity were introduced in late 2015.
[48] See TeGoVA (2012). Country-specific legislation and practice - Ireland, IPAV, Dublin.
[49] See Hypostat 2016, "A review of Europe's housing and mortgage markets", European Mortgage Federation.
[50] See Coates, D., McNeill, J., and Williams, B. (2016). "Estimating cash buyers and transactions volumes in the residential property sector, 2000-2014." Central Bank of Ireland Quarterly Bulletin 3.
[51] See Jamei, M., (2015), "Cash transactions: the myths and the reality", Council of Mortgage Lenders Report.

“transactional activity”, (i.e., “first-time buyers”, “movers” and “residential investment letting” purchasers), between July and September, an increase of 8.8 per cent over 2015Q3[52], and the highest number of drawdowns in a quarter since the announcement of the macroprudential mortgage measures at the end of 2014. Mortgage approvals have also been growing steadily throughout 2016, with approximately 10 per cent more approvals granted in between January and September of this year compared to the same period last year (Chart 38). The current rate of mortgage lending activity in Ireland remains well below the long-run average[53], however, and is also running at approximately half the equivalent level in the UK market.

At end-November, the Central Bank announced the findings of its review of the macroprudential mortgage lending requirements. These are discussed in Box 4.

[52] The value of equivalent drawdowns was €1,372 million in 2016 Q3 and €1,228 million in 2015 Q3.
[53] Department of Housing, Planning, Community and Local Government have mortgage approvals data dating from 1970Q1, with a quarterly average of about 11,000.

Box 1: A taxonomy of the Irish primary dwelling mortgage market, December 2015

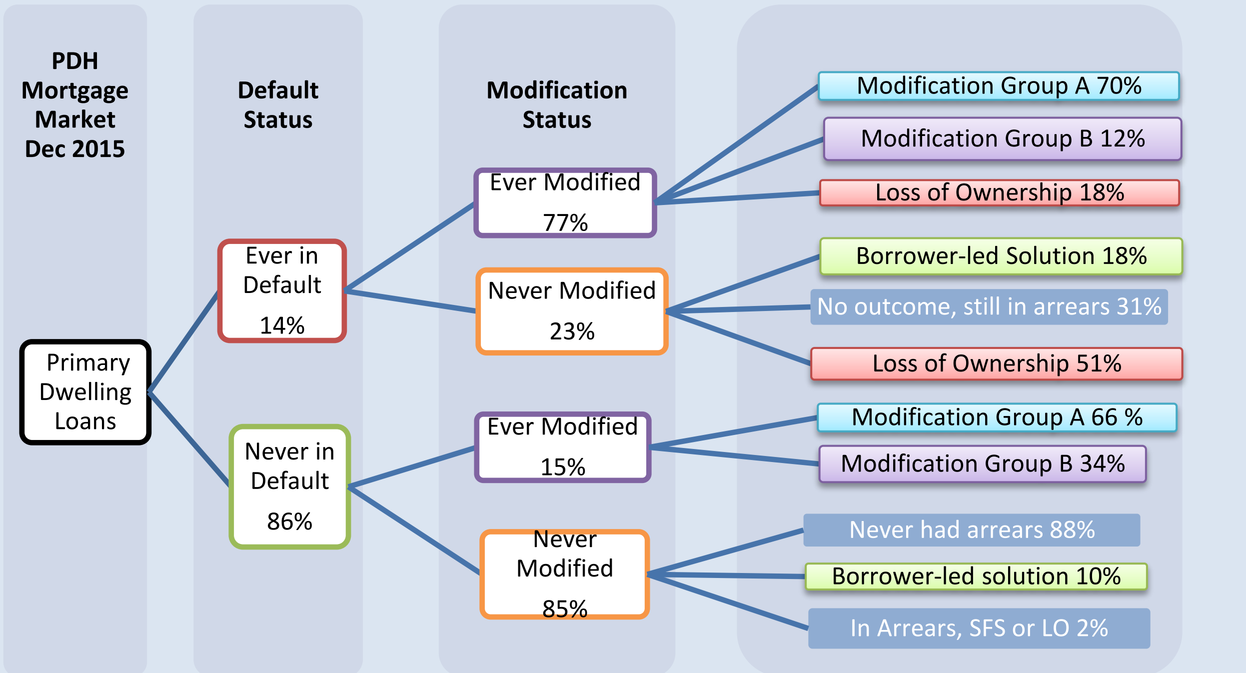
This box provides a taxonomy of the Irish primary dwelling house (PDH) mortgage market as of December 2015. It expands on research outlined in McGuinness (2014)[1] and uses loan level data from three financial institutions as of December 2015, covering about two thirds-of the market.[2] All statistics in this box refer to the number of loans in a category, and do not weight loans by their outstanding balance. Where there are multiple loans against an individual property, and either loss of ownership proceedings or modification are reported for one loan, all loans secured against the property are marked with the same outcome for the purposes of the current analysis.

The data (summarised in Chart A) indicate that 14 per cent of PDH loans outstanding in December 2015 have experienced default (defined here as being more than 90 days past due) at some point since 2010 (irrespective of their current arrears position). Of these, 77 per cent have received some modification or restructure of their mortgage up to end-2015. Of these, 18 per cent are in a situation where a loss of ownership is possible (group "LO"), whether due to legal proceedings having been initiated by the lender, or via the voluntary surrender of the property by the borrower. It is not possible with the data to hand to identify whether the loss of ownership procedure or the modification was the first event initiated. The majority (70 per cent) of modifications in this group are classified in modification group A which are longer-term in nature (arrears capitalisation, term extension, split mortgage, hybrid modifications) rather than group B (interest only periods, payment reductions, payment moratoria). Of the 23 per cent of mortgages that have ever been in default but never modified, 18 per cent are classified as having a borrower-led solution (arrears cleared directly by the borrower without modification, or arrears reduction plans put in place), while for over a half, loss of ownership is possible, with 31 per cent still in default with no identifiable outcome as of end-2015.

The extent of early borrower engagement in the Irish mortgage market is apparent in the data: 15 per cent of the 86 per cent of non-defaulted loans have been modified having never reached 90 days' arrears. In the case of both the ever-defaulted and never-defaulted groups, the number of modified loans is larger than the number of loans undergoing borrower-led solutions. The two per cent of never-defaulted, never-modified loans classified "In Arrears, SFS, or LO" refer to the small group of loans where a Standard Financial Statement (SFS) was completed without the loan ever entering default, where the loan is classified as LO, or where early-stage arrears have accrued without the loan ever surpassing 90 DPD.

Across the "ever in default" and "never in default" groups, there is a large share of loans that have experienced some form of mortgage modification. Among loans that have ever experienced default, the number of modifications is 19 times larger than the number of loans with borrower-led solutions, highlighting the importance of modification as a solution to financial distress. A final aspect of the data here is the share of mortgages at risk of loss of ownership, whether due to legal proceedings issued against them or voluntary sale. These are split between those loans in LO having received a modification at some point, and those loans in LO without ever being modified. The latter group, along with the 31 per cent of those in default having never been modified, are likely to include those that have not engaged with their lender. The existence and size of the group of loans having received a modification but also being classified as LO, however, shows that modifications cannot guarantee that repayments will be made on an ongoing basis in all cases.

Chart A: The Distribution of Primary Dwelling Home Mortgages by outcome, December 2015



Source: Central Bank of Ireland loan level data

1 McGuinness, Anne (2014), "Mortgage Repayments after Permanent Modifications", Central Bank of Ireland, Economic Letter Series Vol. 2014, No. 7
2 Institutions include Allied Irish Bank Group, Bank of Ireland and Permanent TSB alone with each of their subsidiaries. These institutions represent 71 per cent of the PDH mortgage book and 63 per cent of the market value.

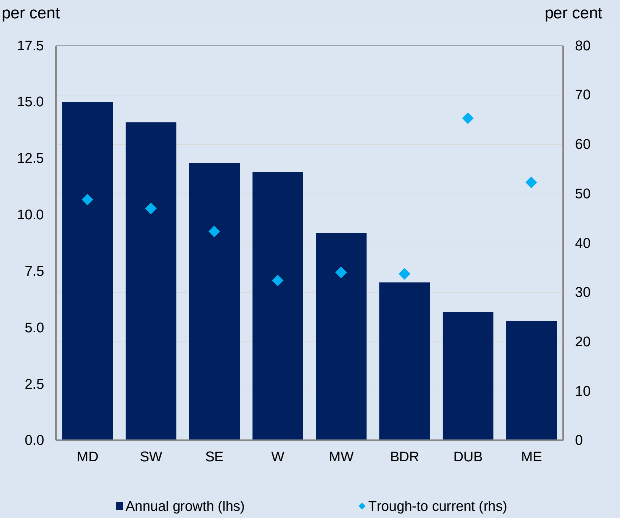
Box 2: CSO Residential Property Price Index

In September, the CSO launched its monthly Residential Property Price Index (RPPI), a new index to replace the existing price index. Unlike its predecessors, the new RPPI considers cash purchases alongside mortgage-funded transactions. This gives a much broader market coverage, with cash purchases having accounted for about one-half of all residential property transactions since 2011.[1] Data from stamp duty returns, building energy ratings (BERs), and the Geo-Directory[2] have been combined with Census statistics to develop a comprehensive database. It has a new regional dimension and includes the value and volume of market transactions by buyer type. The regional breakdown provides twelve new price indices for each of the regional authorities, including the four administrative areas for Dublin.[3] There is also an apartment index at the national level, together with sub-indices for the Dublin and non-Dublin areas. This new property price data source can assist financial stability analysis by providing better measures of price changes, drawing as it does on a more comprehensive coverage of residential property transactions. It also allows market recovery and price variation to be analysed at a more disaggregated spatial level than was previously possible.

This box illustrates some of the new series now available following the launch of the index. Chart A shows that, as of September 2016, annual house price growth varies widely across regions. House price inflation is strongest in the Midlands, at 15 per cent, and weakest in the Mid-East, at just under 5 per cent. When price recovery relative to the previous market trough in each respective region is considered[4], it is evident that the Dublin and the Mid-East regions have experienced the largest rise, so that the strongest market recovery has occurred in the capital and adjacent commuter areas. The disparity in regional recovery could be attributable to lower supply levels and increasing demand (owing to rising employment and income levels) in certain areas relative to others. Chart A indicates higher percentage house price rises now occurring in regional markets which have had relatively lower cumulative rates of increase since the trough, suggesting a catch-up effect possibly occurring.

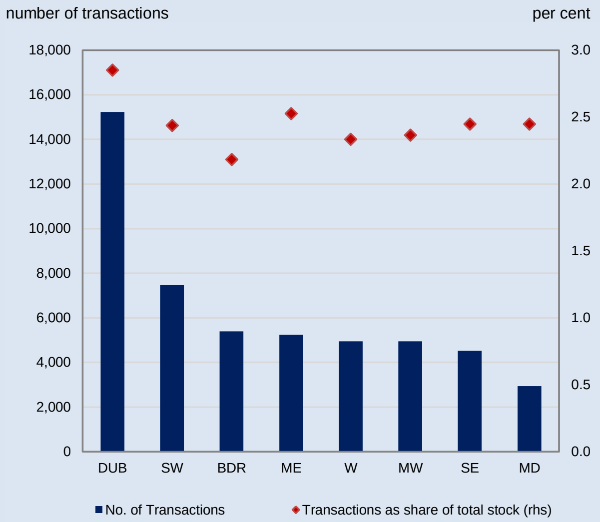
The Dublin market also dominates in terms of sales activity, with approximately one-third of transactions over the twelve months to September 2016 recorded in the capital (Chart B). The number of units sold in Dublin represents 2.9 per cent of the total housing stock in the region, with the Mid-East experiencing the second largest annual turnover rate at 2.5 per cent. Turnover rates across all regions are occurring in a narrow range of 2.2 to 2.9 per cent. By way of international comparison, the UK turnover rate was 4 per cent in 2014 while Sweden registered 3.5 per cent in 2015. In terms of buyer type, Dublin has a greater average monthly share of non-household buyers[5], such as private equity firms and REITS. This has led to increased cash purchases of multiple housing units, e.g. apartment complexes, in recent years, contributing to the higher turnover rate for the capital.

Chart A: Annual house price growth and recovery since market trough: regional, September 2016



Source: CSO and Central Bank of Ireland calculations.
Note: SW refers to the South-West; MD to the Midlands; W to the West; MW to the Mid-West; SE to the South-East; BDR to the Border region; ME to the Mid-East; and DUB to Dublin.

Chart B: Residential property transactions by region: October 2015 to September 2016



Source: CSO and Central Bank of Ireland calculations.
Note: SW refers to the South-West; MD to the Midlands; W to the West; MW to the Mid-West; SE to the South-East; BDR to the Border region; ME to the Mid-East; and DUB to Dublin.

[1] Coates et al (2016) "Estimating Cash Buyers and Transaction Volumes in the Residential Property Sector in Ireland, 2000-2014." Central Bank of Ireland Quarterly Bulletin 03 / July 16.
[2] The Geo-Directory is a dataset of all buildings in the State using data from An Post and Ordnance Survey Ireland and contains the postal address of every building in the State. The Eircode information for each building was used together with addresses from the Census in the matching process of the database construction.
[3] See http://www.cso.ie/en/media/csoie/releasespublications/documents/otherreleases/2008/maps.pdf for breakdown of regional authorities.
[4] The market trough occurred at different points in time for each region, with all occurring at some time between February 2012 and September 2013.
[5] Figures from January 2015 onwards show a monthly average of 16.5 per cent non-household buyer transactions for Dublin compared to 11.1 per cent for the rest of Ireland.

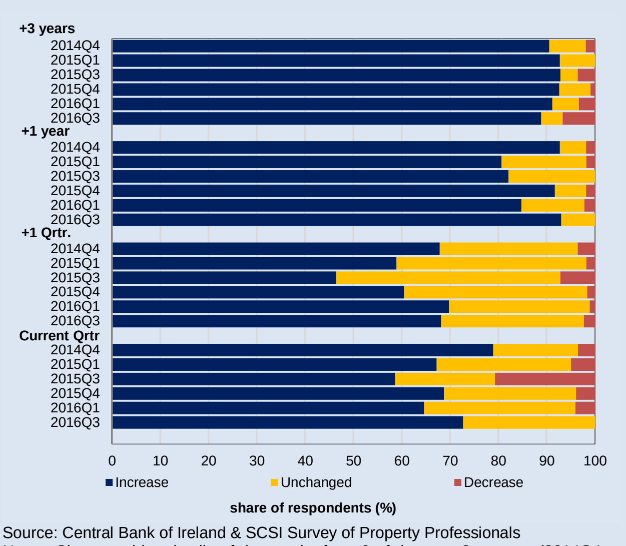
Box 3: Residential property price expectations survey

The Central Bank of Ireland/Society of Chartered Surveyors of Ireland Quarterly Property Survey[1] monitors expectations and developments in the Irish residential housing market, complementing official sources of property market information. This box analyses the findings from the most recent survey (2016Q3) with details on survey participants' future national house price expectations and median-anticipated price inflation rates at the national and Dublin levels over various time horizons. In summary, the majority of respondents expect residential property prices to increase in the short-to-medium-term, while the median rise in prices expected in Dublin over a three-year horizon has risen.

Chart A summarises property price expectations for the national market for quarters beginning with 2014Q4, the quarter just prior to the application of regulatory limits on the proportion of mortgage lending at high loan-to-value and loan-to-income ratios in the Irish residential property market. In general, the majority of survey participants in 2016Q3 continue to expect national house prices to rise over the short to medium term, with the share of those anticipating price increases for one quarter and one year ahead substantially exceeding 2015Q3 values. In Dublin, the percentage anticipating increased house prices is at its highest share in comparison to previous surveys for the current quarter (77 per cent), +1 quarter (76 per cent), and +1 year (90 per cent) horizons. In terms of the factors driving these expected house price increases, respondents are asked to rank which factors they consider to have the greatest influence on current house price developments from a list of twelve pre-selected factors, with a further option for other issues not on that list. The most important factor identified nationally and for Dublin was the availability of second-hand stock, constituting 32 and 35 per cent of respondents' first-ranked factor for each market, respectively. Access to bank credit (26 and 25 per cent, respectively) was the second-ranked factor. The supply of new housing was viewed as a more pressing issue nationally than in Dublin. Outside Dublin, the availability of second-hand units outweighed all other factors as the most significant issue by respondents in the Mid-East and West, in particular. Irish economic conditions are a relatively minor influence on survey expectations formation, particularly for Dublin.

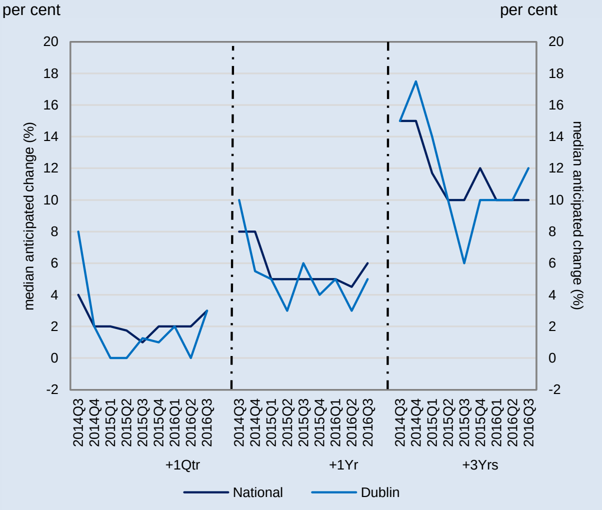
Chart B presents the median-anticipated house price change for the national and Dublin levels for the nine most recent surveys. In terms of the extent of the anticipated changes, the national median expectations in the 2016Q3 survey for one quarter, one year and three years ahead were 3, 6 and 10 per cent, respectively. The anticipated change in prices in Dublin has moved in a greater range over time than at the national level, with the median expected increase for +3 years now at 12 per cent. The most recent survey also shows the median expected price increases to be higher now for regions such as the West, the Border and the South-West than for Dublin or the national market as a whole for the +3 year horizon. It should be noted that the number of Survey respondents varies by region. The trends observed in the Central Bank of Ireland/SCSI survey data are broadly in line with a recent Daft.ie survey[2] which shows expected national house price increases of 4.7 per cent over the next 12 months.

Chart A: Expectations of residential property price movements (National): 2014Q4 to 2016Q3



Source: Central Bank of Ireland & SCSI Survey of Property Professionals
Notes: Chart provides details of the results from 6 of the past 8 surveys (2014Q4 to 2016Q3). Number of observations varies from survey to survey

Chart B: Q-on-Q median anticipated change in National and Dublin residential property prices over +1Qtr, +1Yr, and +3Yrs time horizons



Source: Central Bank of Ireland & SCSI Survey of Property Professionals
Notes: Chart provides details of the results from the past 9 surveys (2014Q3 to 2016Q3). Number of observations varies from survey to survey

[1] The Central Bank/SCSI Quarterly Property Survey began in 2012. Its respondents include estate agents, auctioneers and surveyors, as well as those with a more indirect interest in the industry such as economists, market analysts and academics. While the main focus of the survey is on participants' price expectations, questions are also included on activity levels and other market issues. The survey is a snapshot of respondents' expectations at a particular point in time and so can provide only limited information about possible future property price developments. It also provides a measure of uncertainty regarding those expectations, which is a useful complement to the available information on the domestic property market.

[2] Daft.ie 2016Q3 Survey

Box 4: Review of residential mortgage lending requirements

This box presents an overview of the first review of the residential mortgage lending requirements (loan-to-value (LTV) and loan-to-income (LTI) measures). The review was published on 23 November 2016 and is available on the Central Bank's website, along with supporting materials.[1]

The mortgage market measures, which specify limits on the LTV and LTI ratios applying to new lending for residential purposes, were introduced from 9 February 2015.[2] The measures were designed to enhance the resilience of banks and borrowers to future shocks and to reduce the potential for house price-credit spirals from developing in the future. The original calibration of the measures was informed by international standards and by Central Bank research into mortgage defaults and losses in Ireland.[3] The review examined the performance of the measures against their stated objectives as well as the potential impact of the measures on borrowers and the potential interplay between the measures and the rental market and unsecured lending. The review was informed by extensive analytical work, most of which has been published on the Central Bank's website, and on submissions to a public call for evidence on the measures.[4]

The review noted that while the risks and vulnerabilities in the residential real estate market in Ireland have declined over the period since the initial announcement of the mortgage market measures (in October 2014), they remain at a high level, by both international and historical standards. This leaves the Irish economy and financial system vulnerable to any economic or housing market downturn that might occur in the future, and underlines the importance of having rules in place to strengthen the resilience of households and banks to adverse shocks.

The review found that the overall framework of the Regulations is appropriate and effective in meeting the objectives of the measures. In particular, limiting the amount of borrowing that can take place at high LTV and LTI ratios reduces risks to financial stability by curbing house price-credit spirals, restricting the build-up of borrower indebtedness, and lowering the risk of borrowers defaulting on mortgages. While the risk of housing and financial crises cannot be eliminated, the evidence suggests that the rules that are in place would reduce the probability and severity of future crises. However, when considering the overall calibration of the measures, three structural changes to the measures were identified, which will improve the effectiveness and sustainability of the framework. These changes, along with one technical change, are outlined below. These changes will be effective from 1 January 2017.

<u>Changes to the Regulations:</u>

1. Under the mortgage Regulations, first-time buyers (FTBs) are subject to a 10 per cent deposit requirement on a house purchase up to a value of €220,000, and a 20 per cent deposit requirement for any excess above that value. From 1 January 2017, the property value threshold of €220,000 will be removed, such that a 90 per cent LTV limit will apply to all first-time buyers (FTBs). There is no change to the deposit requirements for second and subsequent buyers (SSBs) or buy-to-let investors (BTLs).[5,6]
2. The structure of the proportionate caps will be amended. At present, financial institutions are permitted to extend up to 15 per cent of the value of their total new lending for primary dwelling homes (FTBs and SSBs) above the LTV limits set by the mortgage Regulations. From 1 January 2017, separate allowances for FTBs and SSBs are being introduced. For SSBs, 20 per cent of the value of new lending to this group will be allowed above the 80 per cent LTV limit set by the Regulations and 5 per cent of the value of new lending to FTBs will be allowed above the 90 per cent LTV limit for that group.
3. The current requirement for a property valuation to take place within two months of mortgage drawdown is extended to four months.
4. There is a technical amendment to the scope of the non-primary dwelling home limit so that large commercial landlords and developers are not in-scope of the Regulations. This is being implemented by applying the Regulations based on the definition of consumers in the Consumer Protection Code 2012 and that used by the Financial Services Ombudsman to define the scope of its jurisdiction.[7]

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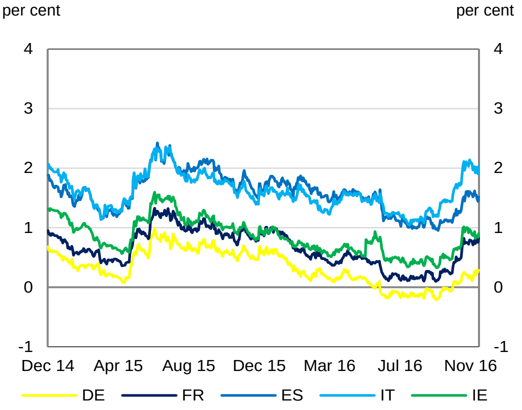
[1] See http://www.centralbank.ie/stability/MacroprudentialPol/Pages/LoantoValueLoantoIncome.aspx#research and Central Bank of Ireland (2016), "Review of residential mortgage lending requirements", Central Bank of Ireland.
[2] For details of the measures, see: Central Bank of Ireland (2015), Information note: restrictions on residential mortgage lending, Central Bank of Ireland.
[3] See Cassidy, M. and N. Hallissey (2016), "The introduction of macroprudential measures for the Irish mortgage market", Economic and Social Review, 47 (2), pp. 271-297
[4] See Central Bank of Ireland (2016), "Feedback statement on call for submissions: review of residential mortgage lending requirements", Central Bank of Ireland.
[5] This change removes the need to review the appropriateness of the threshold, which was originally calibrated with reference to median house prices in Dublin, on an annual basis. Furthermore, new evidence on default risk among FTBs and SSBs confirms that FTBs still have a lower probability of default relative to SSBs. However, this differential is similar for borrowers purchasing low and high valued houses (see Section 5(b) in "Review of residential mortgage lending requirements" for details).
[6] The review also highlighted the importance of the LTI limit to the overall framework, which is unchanged following the review. Irrespective of the value of the LTV threshold, the LTI limit, at 3.5 times income, acts as a constraint on many FTBs of higher-valued properties from taking on significantly higher leverage.
[7] This definition includes persons acting outside the course of their business, trade or profession, in addition to persons (including sole traders, companies, partnerships and other unincorporated bodies of persons) with an annual turnover of €3 million or less in the preceding financial year taking into account the combined turnover of any group of persons of which they are a member.

3.4 Sovereign sector

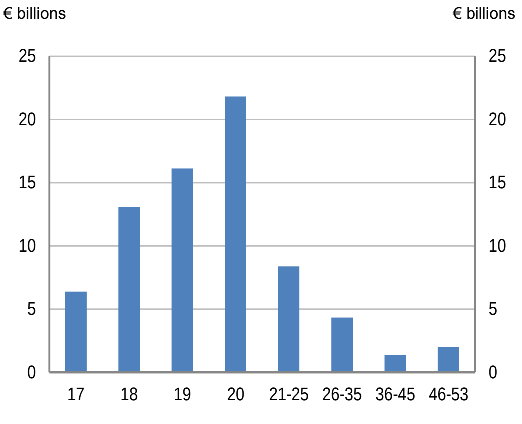
Ireland's public finances continue to improve but remain vulnerable to external and domestic shocks. While declining, the government debt ratio remains high, as it does in other euro area Member States. Low yields prevail in bond markets, although they have risen somewhat of late. A large bond-buying programme, the ESCB EAPP, is ongoing in the euro area. Indicators of sovereign bond market stress are relatively muted in Member States. Risk premia on sovereign bonds are vulnerable to an upward revision, which could be abrupt and could cause market tensions.

Chart 39: Sovereign bond yields for selected EA Member States, 10-year maturity



Source: Thomson Reuters Datastream.
Notes: Chart shows yields on sovereign bonds, 10-year maturity. Last observation: 8 December 2016.

Chart 40: Maturity profile of Ireland sovereign debt



Source: NTMA.
Notes: Entries for 2021-25, 2026-35, 2036-2045 and 2046-53 are yearly averages. Maturity profile as at end-October 2016. In light of maturity extensions granted in mid-2013, it is not expected that Ireland will have to refinance any of its EFSM loans before 2027. The revised maturity dates of individual EFSM loans will only be determined as they approach their original maturity dates. The chart reflects both original and revised maturity dates of individual EFSM loans.

Domestic developments

The Irish sovereign has benefitted from low bond yields (Chart 39) and strong investor demand in fixed income markets in pursuing its funding needs in 2016. Ireland is now in the A ratings category with the major credit rating agencies. The NTMA has raised €8.35 billion of long-term debt this year, within its target range of €6 billion to €10 billion for 2016. Exchequer cash and liquid assets are expected to be about €8 billion at end-year. The next substantial bond redemption is due in October 2017 (when a redemption of €6.4 billion is due). Some €47 billion of medium/long-term debt is due to mature between 2018 and 2020 (Chart 40).

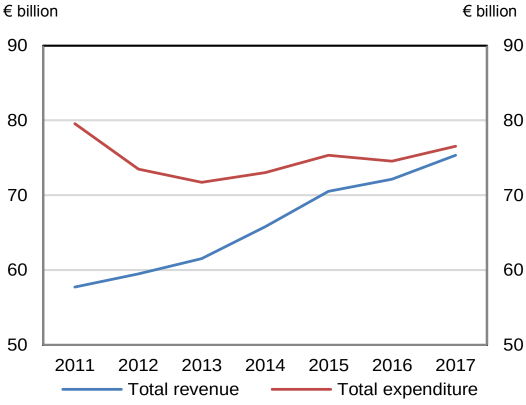
These developments in sovereign funding occur against a background of ongoing improvement in the public finances. Government revenue has been closing the gap with expenditure over time, a development which is projected to continue in 2017 (Chart 41). A denominator effect, following larger-than-expected GDP in 2015 (see section 3.1), contributed to the General Government deficit ratio falling from 3.7 per cent in 2014 to 1.9 per cent in 2015. Tax revenue in 2015 benefitted from a corporation tax take some 50 per cent above the 2015 Budget target.

The preventive arm of the SGP now applies to Ireland and it is important that its requirements – in terms of the structural balance and in relation to government expenditure – are achieved on an annual basis. The 2017 Budget projects deficit ratios of 0.9 per cent and 0.4 per cent in 2016 and 2017, respectively, and also anticipates that the medium-term objective of a structural deficit of 0.5 per cent of GDP will be achieved in 2018.

The higher-than-expected GDP in 2015 accentuated the decline in the gross debt ratio, from 105.2 per cent at end-2014 to 78.6 per cent at end- 2015. It is expected to stand at 76 per cent at end-2016. Given the issues surrounding national income measurement, an alternative to the debt-to-GDP ratio is the ratio of debt to total government revenue. It indicates a smaller decline in the debt burden over time (Chart 42).

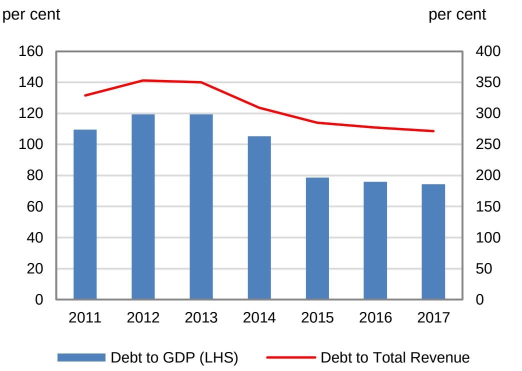
The small, open nature of the Irish economy leaves it vulnerable

Chart 41: General Government revenue and expenditure



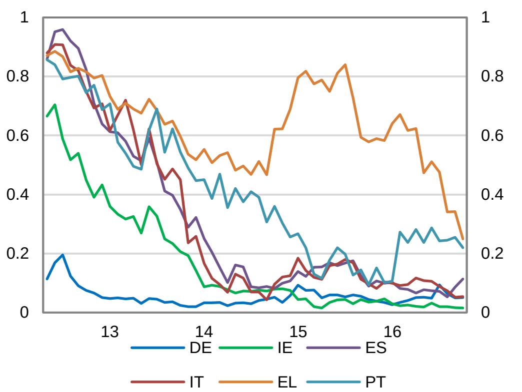
Source: EU AMECO; 2017 Budget.

Chart 42: General Government gross debt ratios



Source: EU AMECO; 2017 Budget.
Notes: Total revenue of government is measured on a General Government basis.

Chart 43: Composite indicator of sovereign stress in selected EA Member States



Source: ECB Statistical Data Warehouse.
Notes: The composite indicator of sovereign stress aims to measure the level of stress in EA sovereign bond markets. Last observation: October 2016.

to adverse economic developments from abroad as well as those which may arise from within the domestic economy. As noted in section 3.1, budgetary developments are occurring against a background of the balance of risks to domestic economic projections being to the downside, reflecting in particular the uncertainty caused by the outcome of the referendum on UK membership of the EU.

International sovereign and fiscal performance

Low yield values have been features of international sovereign bond markets in recent years (Chart 39). Monetary policy, including quantitative easing programmes such as the ESCB EAPP, is likely having an effect on bond values, while low output growth and inflation expectations, a search for yield among investors, and a demand for long-maturity fixed income assets at a time of economic and political uncertainty may also be contributing. A feature of fixed income markets is the increasing holdings of bonds by central banks. Within the EA, the ESCB EAPP has bought over €1 trillion of government bonds since it commenced in March 2015. Although remaining low by historical comparison, government bond yields, including those on US Treasury bonds, have risen of late, with political uncertainty and revisions to inflation, growth and policy rate expectations possibly contributing.

A composite indicator of systemic stress in euro area sovereign bond markets points to varying levels of stress over time and across Member States (Chart 43).[54] Indicator values for Ireland have been low of late. The sovereign bond markets of Spain and Italy have also been experiencing relatively low levels of stress. Greece's indicator is high, if declining, while that of Portugal rose sharply in the early months of 2016. Public debt ratios in the EU and beyond have risen over recent years, reflecting, in part, low nominal output growth.

Looking ahead, actual or expected rises in growth or inflation rates, geo-political developments, and monetary policy could affect bond yields. Risk premia in international financial markets could be subject to an upward revision, which could be abrupt. This could put downward pressure on government bond yields if those bonds were viewed as a safe haven for holding wealth or, alternatively, government bonds could be seen as an overvalued asset class which could lead investors to seek to sell them. Developments, if pronounced, could put sovereign bond markets under stress and could cause spillover effects between them to occur.[55] Bond markets have undergone structural changes in recent years, which could affect bond market volatility at times.[56]

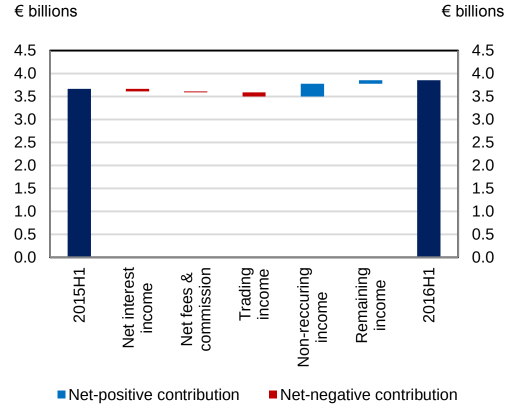
[54] For more information on the ECB composite indicator of sovereign stress, see Hollo, D., Kremer, M., Lo Duca, M. (2012). "CISS - A Composite Indicator of Sovereign Stress in the Financial System." ECB Working Paper 1426.
[55] The form such effects take during periods of financial crisis has been the subject of Central Bank research in recent years. See, Cronin, D. (2014). "Interaction in euro area sovereign bond markets during the financial crisis." Intereconomics, 49, 4: 212-220; Conefrey, T. and D. Cronin (2015) "Spillover in euro area sovereign bond markets." Economic and Social Review, 46, 2: 197-231; Cronin, D., Flavin, T., Sheenan, L. (2016). "Contagion in eurozone sovereign bond markets? The Good, the Bad and the Ugly." Economics Letters, 143: 5-8.
[56] These changes and their potential implications for bond markets were considered in section 2.4 of Macro-Financial Review 2015: II and Macro-Financial Review 2016: I.

4. FINANCIAL SYSTEM

4.1 Banking sector

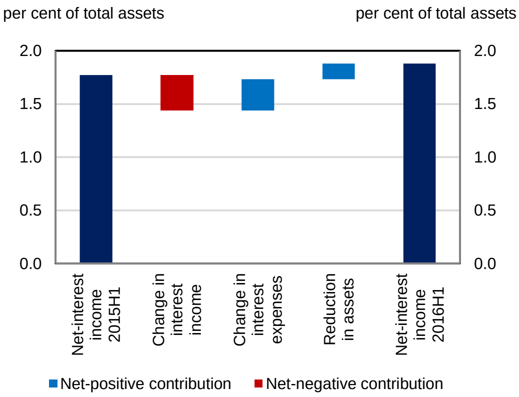
The process of bank balance sheet repair and the work-out of impaired loans have continued since the last Review. Irish retail banks' balance sheets continue to contract in size as asset disposals and loan redemptions more than offset increases in new lending. The decline in balance sheet size has facilitated a reduction in non-deposit categories of funding. The low interest-rate environment has helped reduce funding costs but interest income has also fallen. Reflecting the challenging operating environment, aggregate profits in 2016H1 declined in comparison to a year earlier. Fully-loaded capital ratios, in aggregate, have continued to increase but developments in banks' pension deficits have negatively affected the capital base.

Chart 44: Developments in Irish retail banks' operating income



Source: Central Bank of Ireland.
Note: Data are collected in accordance with the EBA's FINREP reporting requirements. The middle four series show differences in the components of income between 2015H1 and 2016H1.

Chart 45: Contributions to Irish retail banks' net-interest margins



Source: Central Bank of Ireland calculations.
Note: Data are annualised. Data are collected in accordance with the EBA's FINREP reporting requirements.

The Irish banking system can be broadly categorised into those institutions whose activities provide financial services to the domestic economy and other banks that, while located in Ireland, have little direct interaction with the domestic economy but are internationally focussed. Developments in foreign-owned resident banks and credit unions are considered in the final two sub-sections of section 4.1. The rest of the section focuses on five banks, described hereafter as the Irish retail banks, offering retail banking services within Ireland (Allied Irish Banks plc, The Governor and Company of the Bank of Ireland, Permanent TSB, KBC Bank Ireland plc and Ulster Bank Ireland Designated Activity Company).[57] The latter two banks had previously been included in the foreign-owned resident bank section.

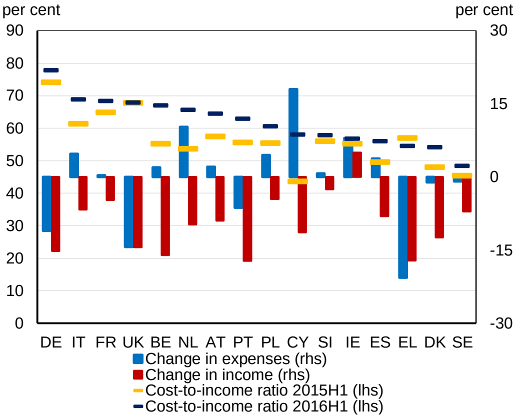
Income and profitability

Irish retail banks continued to generate profits through the first half of 2016, albeit six per cent lower than in the same period in 2015. Growth in operating income was low compared to the increase in operating expenses. This, when coupled with reductions in the write-back of provisions, highlights banks' need to develop sustainable sources of income to maintain profitability.

Irish retail banks' operating income increased marginally in 2016H1 (Chart 44). Net-interest income, the predominant source of income for Irish retail banks, declined marginally by two per cent. Low levels of new lending and the legacy of low-yielding tracker mortgages continue to act as a drag on interest income. The low interest-rate environment, however, has led to a fall in funding costs. Net-interest margins have increased, primarily due to a combination of a decline in assets and lower interest expenses which more than offset the decline in interest income (Chart 45).

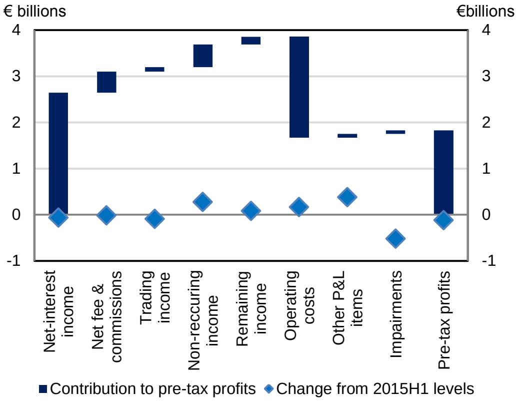
[57] Previously, the focus in the MFR was on domestic banks covered by the ELG.

Chart 46: International comparison of cost-to-income ratios



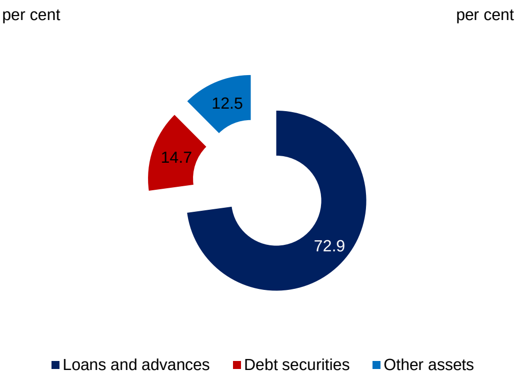
Source: SNL Financial and Central Bank of Ireland calculations.
Note: Country values are based on a minimum sample of three banks from each country. The sample of banks was drawn from the list of banks that participated in the 2014 EBA stress-testing exercise.

Chart 47: Breakdown of pre-tax profits



Source: Central Bank of Ireland calculations.
Notes: For the six-month period to end 2016H1. Data are collected in accordance with the EBA's FINREP reporting requirements.

Chart 48: Irish retail banks' breakdown of assets



Source: Central Bank of Ireland
Notes: Data relate to 2016Q3.

The continuation of the low interest-rate environment has seen banks across Europe, including Irish retail banks, attempting to diversify income sources in an effort to support profitability. Irish retail banks' higher operating income can be largely attributed to income generated from the disposal of assets. Some Irish retail banks increased income through the sale of their interest in Visa Europe. This one-off item (part of 'non-recurring income') helped offset the decrease in trading income that many banks experienced around the time of the Brexit vote (Chart 44).

A number of Irish retail banks operating in Ireland are also active in the UK market. The depreciation of sterling relative to the euro has acted as a drag on aggregate income. Between the end of 2015 and 2016H1, the value of sterling fell by 11 per cent. Since then, sterling has declined by a further 3 per cent. Over the medium term, the continued uncertainty surrounding the UK's future relationship with the EU will leave Irish banks susceptible to exchange-rate movements and the effects of adverse shocks to the UK and domestic economy. The UK's exit from the EU could have longer-term structural consequences for those Irish banks with a presence in the UK.

Operating expenses were 8 per cent higher in the first six months of 2016 when compared to the same period last year. Increases in infrastructure investment and regulatory costs have contributed to the higher cost base. As a result of these developments in income and expenditure, the cost-to-income ratio increased in the first half of 2016 in comparison with 2015H1 (Chart 46). The ratio remains broadly in line with international peers, many of whom have also experienced increasing cost-to-income ratios over the past year, reflecting the difficult operating environment.

The write-back of provisions continued to contribute positively to profits (Chart 47). However, net write-backs declined in value compared to 2015H1. Restructuring costs, which acted as a drag on profitability last year, were not incurred to the same degree in 2016H1.[58] Overall, higher growth in operating expenses than in income, combined with reductions in the write-back of provisions, has resulted in a modest decline in pre-tax profits. Profitability across Irish retail banks declined by 6 per cent in 2016H1 relative to the same period last year.

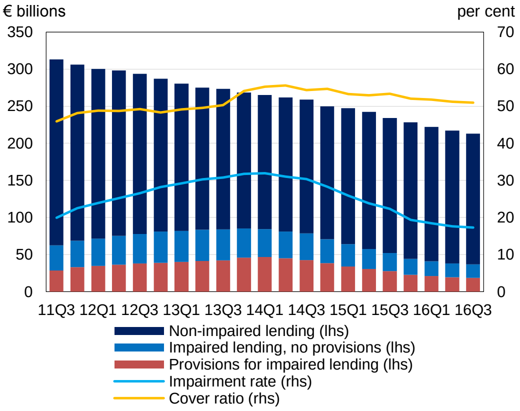
Irish retail banks' income remains concentrated in net-interest income. Contracting balance sheets, coupled with the low-interest rate environment, continue to put pressure on banks' ability to generate sustainable income. In this context, it is important that banks remain cognisant of the risks that they are exposed to.

Asset and credit quality

The aggregate total assets of Irish retail banks stood at €274 billion in 2016Q3, down 7 per cent on the previous year. A fall in

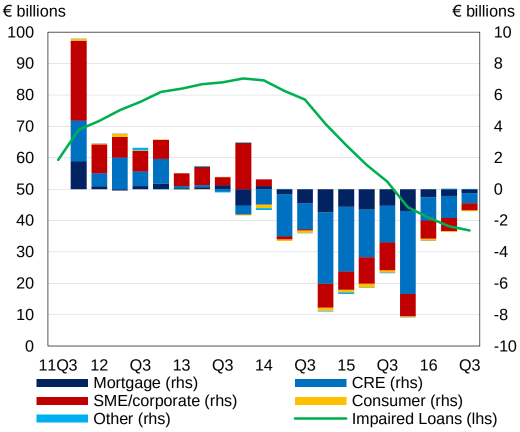
[58] For the purpose of the analysis non-reoccuring restructuring costs are reported separately from operating expenses and are included under 'other P&L items'.

Chart 49: Irish retail banks' credit exposures and asset quality



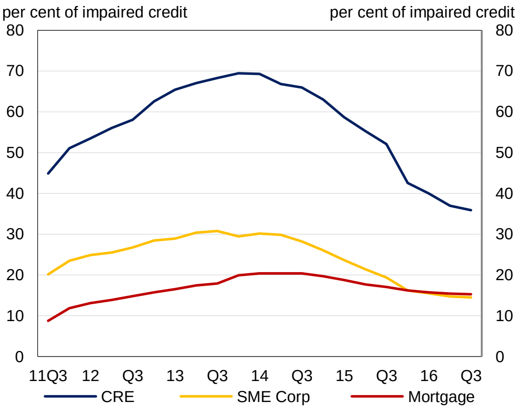
Source: Central Bank of Ireland.
Notes: Data are consolidated. Total lending is represented by drawn exposures. Impairments are represented by CRD default loans. Last observation: 2016Q3.

Chart 50: Irish retail banks' stock and flow of impairments



Source: Central Bank of Ireland.
Notes: Data are consolidated. Last observation: 2016Q3. The green line indicates the stock of impaired loans; all other series are changes in its components

Chart 51: Irish retail banks' sectoral impairment rates



Source: Central Bank of Ireland.
Notes: Data are consolidated and represent impairment rate for each sector. Last observation: 2016Q3.

loans and advances and a reduction in the holdings of debt securities, including NAMA bonds, were the main contributors to the year-on-year decline. The relative breakdown of assets, however, has changed very little over the past twelve months. Loans and advances make up over 72 per cent of assets, with debt securities and other assets accounting for the remainder (Chart 48).

Outstanding loan balances declined by 9 per cent year-on-year, to €213 billion in 2016Q3 (Chart 49), as loan redemptions and portfolio sales continued to outpace new lending. Also contributing were on-going loan-restructuring and foreign exchange movements. Irish retail banks' loan books are highly concentrated in property-related lending (residential (65 per cent) and commercial (11 per cent)), with SME/corporate loans accounting for about one-fifth of loans. Over 72 per cent of the value of the stock of loans has been advanced to domestic customers.[59]

The effective workout and resolution of distressed loans is crucial to bank viability and to macroeconomic performance. High levels of NPLs can constrain both credit growth and economic activity. Impaired loans tie up capital and can diminish the ability of banks to undertake new lending to the economy.

There has been a further improvement in credit quality since the last Review. Overall, the value of NPLs held by Irish retail banks decreased by €15.6 billion over the past year to €37 billion in 2016Q3 and is now substantially below its 2013 peak (Chart 50).[60] This fall has occurred across all major loan categories, with the largest reductions occurring in commercial property portfolios, where impaired loans have decreased by almost €9 billion since the end of 2015Q3 (Chart 50). Deleveraging strategies, such as portfolio sales and a renewed focus on distressed loan restructuring, have contributed to this outcome. Nevertheless, with approximately 17 per cent of the loan book in arrears, the level of impaired lending remains high, including relative to European peers.[61]

Along with being the largest lending category, the majority (57 per cent) of distressed loans are mortgages.[62] Despite recent progress, the mortgage arrears resolution process has proved to be slow and complex. Impaired mortgages at the Irish retail banks stood at 15 per cent of the outstanding mortgage book at the end of 2016Q3, down from over 17 per cent a year earlier (Chart 51).[63] (See Box 5 for an overview of the extent of borrower-lender engagement in the mortgage market.)

Proportionately, the CRE loan book remains the most distressed asset class, despite a sizeable reduction in the value of

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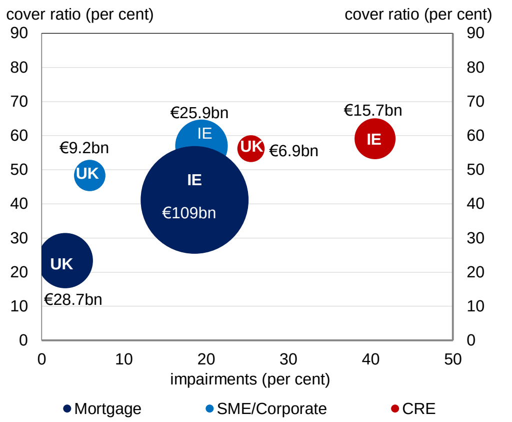
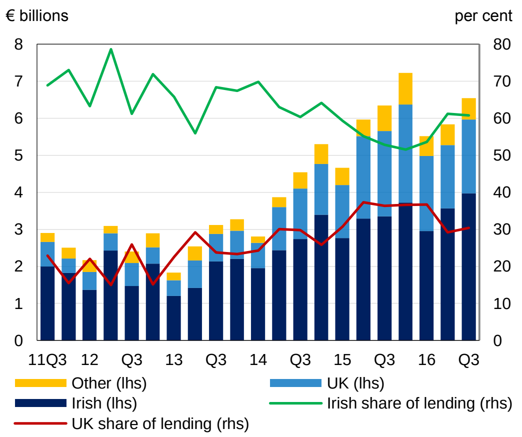
[59] The UK accounts for the majority of remaining geographical exposures, with a 24 per cent share of total lending.
[60] Data used in the analysis is based on data collected in the QSFR. Care should be taken when comparing the analysis presented here with data from other sources. The definitions used in the QSFR may differ from those reported from other sources such as the EBA.
[61] The comparable figure for the euro area is closer to 7 per cent. For more information see ECB (2016) 'Financial Stability Review' November, for more.
[62] This share has been growing in recent years (e.g., in 2014Q3 and 2015Q3 it was 39.6 and 47.6 per cent, respectively) as the pace of decline in the value of mortgage arrears has been slower than that for overall impaired loans. CRE and SME/corporate borrowers accounted for the bulk of the remaining NPLs in 2016Q3, at 22 and 17 per cent of the total, respectively.
[63] According to the Central Bank of Ireland's Residential Mortgage Arrears and Repossessions statistics, 9 per cent of all Irish mortgages by volume were in arrears of at least 90 days at the end of 2016Q2.

Chart 52: Loan quality by sector and geography



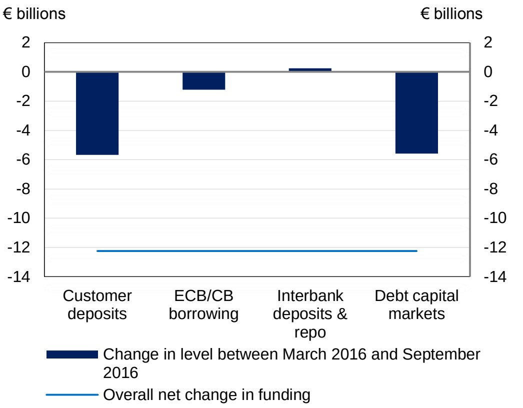
Source: Central Bank of Ireland.
Notes: Data are consolidated. Size of circle represents the share of lending to that particular sector. Impairment rate calculated as CRD default loans/drawn exposures shown on horizontal axis. Cover ratio, calculated as Impairment Provisions/CRD default loans shown on vertical axis. Data relate to 2016Q3.

Chart 53: Irish retail banks' new lending



Source: Central Bank of Ireland.
Notes: Data are consolidated. Last observation: 2016Q3

Chart 54: Change in Irish retail banks' funding composition



Source: Central Bank of Ireland.

outstanding impaired loans over the past few years (Chart 51). At end-2016Q3, 36 per cent of CRE loans, with an outstanding balance of €8.3 billion, were non-performing. This represents an improvement from €17.1 billion a year before and from over €37.3 billion in June 2013. The economic recovery and the revival in the commercial property market since then have made it much easier for Irish institutions to dispose of impaired CRE portfolios. There has also been a decline in the percentage of SME/corporate loans in arrears (Chart 51).

The reduction in the value of distressed loans and improving collateral values has seen the stock of impairment provisions also decrease (Chart 49). Loan-loss provisions dropped to €18.8 billion at the end of 2016Q3, approximately 60 per cent lower than the peak figure of March 2014. At 51 per cent in 2016Q3, the cover ratio has been relatively stable in recent years. Aggregate figures can mask the variance in provisioning levels across institutions, however, and do not recognise different sectoral and geographical exposures. CRE loans originated in Ireland have a higher cover ratio than SME/corporate or mortgage lending (Chart 52). Cover ratios on UK lending are lower across the main lending categories as impairment rates are generally lower on the UK portion of the loan book than the Irish component (Chart 52).

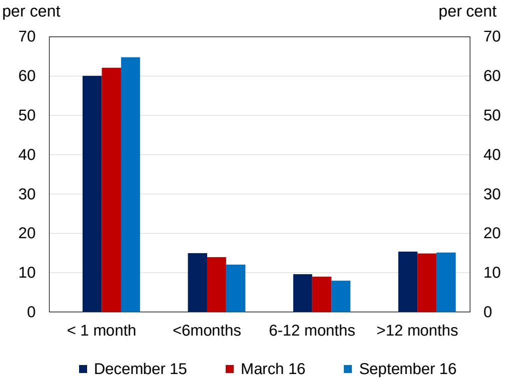
New loans of over €6.5 billion were written in the third quarter of 2016 (Chart 53), bringing cumulative new lending over the past year to €25 billion. Although this constituted an annual increase of 13 per cent, new loan origination remains relatively subdued and below levels needed to offset loan redemptions. Lending to SME/corporates and for residential mortgages each account for approximately 40 per cent of total new lending in 2016Q3, while 14 per cent of new loans went to CRE. Although overall lending to the CRE sector is still relatively low, rising construction activity and the provision of debt and refinancing facilities to commercial property investors could see CRE lending grow in the future.

The UK's decision to leave the EU will have implications for Irish retail banks that are active in that market. The share of new credit extended to the UK fell back to 30 per cent in 2016Q3, from a high of 37 per cent a year before (Chart 53). Notwithstanding this, UK lending had been growing steadily in recent years, reflecting institutional-specific factors and increased mortgage lending there.

Funding

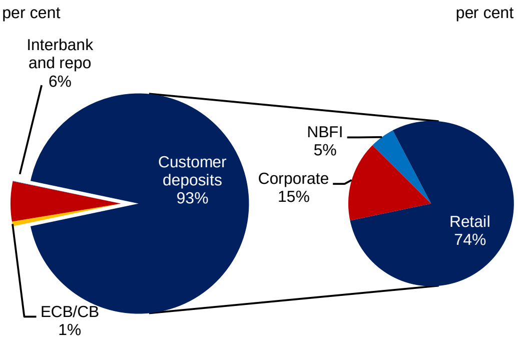
Irish retail banks' funding levels have continued to decline since the last Review, with some incremental changes in funding structure. Reflecting the banks' deleveraging, the outstanding level of funding declined by 5.2 per cent between March and September 2016. Funding continues to benefit from the prevailing interest-rate environment with both deposit rates and bond yields remaining low. However, the sector is susceptible to any negative changes in investor sentiment. The uncertainty

Chart 55: Maturity profile of Irish retail banks' funding



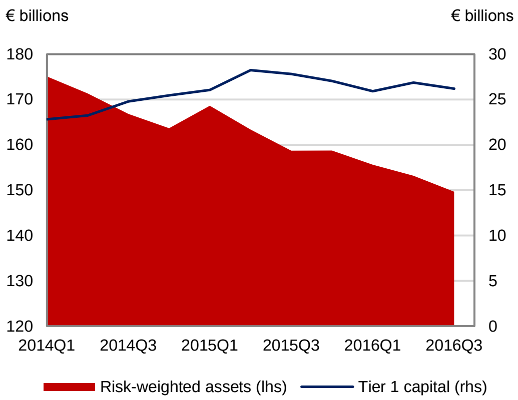
Source: Central Bank of Ireland.
Notes: Data are consolidated

Chart 56: Components of less than one month funding



Source: Central Bank of Ireland.
Note: Right-hand circle gives breakdown of customer deposits. Data as at September 2016.

Chart 57: Irish retail banks' transitional Tier 1 capital and risk-weighted assets



Source: Central Bank of Ireland calculations.
Notes: Data are collected in accordance with the EBA's COREP reporting requirements. Last observations: 2016Q3.

surrounding the UK's exit from the EU has increased volatility in financial markets, which could affect investor sentiment and banks' access to wholesale funding.

Total funding fell by just over €12 billion between March and September 2016 to €225 billion (Chart 54). While interbank deposits and repos increased marginally, all other funding sources declined over this period. Since the last Review, customer deposits declined by €5.7 billion. This fall was driven by a decline of €3.7 billion in retail deposits, while corporate deposits fell by €1.1 billion. The reduction in these deposit values would in part reflect exchange rate movements, in particular the depreciation in sterling relative to the euro. Despite the reduction in the level of deposits, its overall share of funding increased marginally to 79 per cent of total funding, or €177 billion at end-September 2016. The redemption of subordinated debt contributed to the large decline in outstanding debt.

The proportion of total funding with a maturity of one month or less increased by 3 percentage points between March and end-September, to 65 per cent (Chart 55). Retail deposits account for almost three-quarters of those funds (Chart 56). Although this source of funding is short term, it is viewed as relatively stable due to retail deposits tending to be 'sticky' in nature.

Interest rates on Irish retail deposits have continued on a downward trajectory with those offered on existing deposits declining by 4 basis points, and those on new business falling by 5 basis points, between June and September 2016. The high share of funding sourced from deposits coupled with the decline in interest rates has helped to reduce Irish retail banks' funding costs. Several banks have issued debt since the last Review and continue to benefit from the low interest-rate environment, and its associated search for yield.

The domestic banks' liquidity positions are currently at, close to, or in excess of their LCR requirements.[64] The introduction of the BRRD in January 2016 has not had an apparent effect on banks' funding to date but has the potential to increase debt funding requirements and costs in the future.

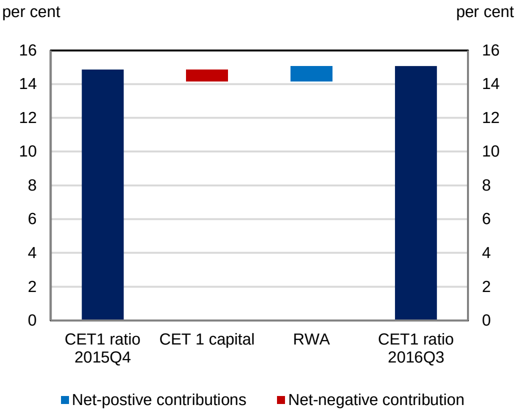
Solvency

The aggregate capital position of the Irish retail banks has remained stable since the last Review, supported by profits and deleveraging. However, high levels of NPLs, a change in the interest rate environment, and market uncertainty following the UK referendum on EU membership could adversely affect banks' profits and capital base over time.

Irish retail banks' RWAs continue to decline, reflecting a reduction in the size of loan books. Since 2016Q1, RWAs have fallen by 3.8 per cent while transitional Tier 1 capital increased by 1.1 per cent to over €26 billion by 2016Q3 (Chart 57).

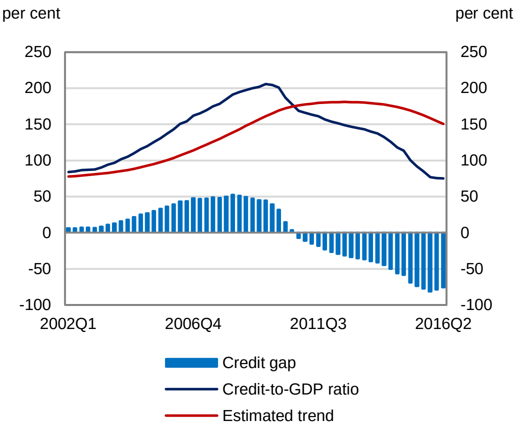
[64] The minimum requirement of 100 per cent is being phased between October 2015 and January 2018.

Chart 58:Developments in Irish retail banks' fully-loaded common equity Tier 1 ratios and contributing factors



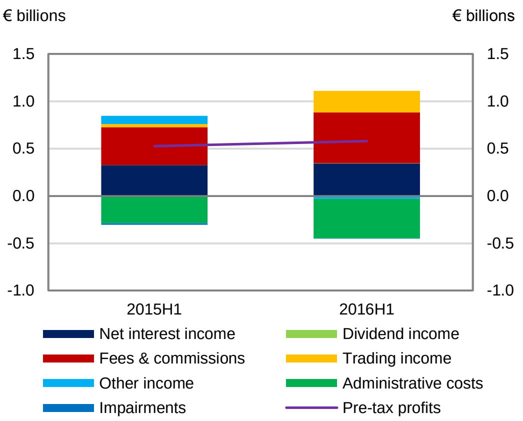
Source: Central Bank of Ireland calculations.
Notes: Data are collected in accordance with the EBA's COREP reporting requirements.

Chart 59: Credit-to-GDP ratio and gap – National-specific approach



Source: CSO, BIS and Central Bank of Ireland calculations.
Notes: The estimated trend is calculated using a Hodrick-Prescott filter. The credit gap is defined as the deviation of the credit-to-GDP ratio from its long-run trend. Last observation: 2016Q2. For more on the CCyB see www.centralbank.ie.

Chart 60: Foreign-owned banks' profitability



Source: Central Bank of Ireland.
Notes: Data are collected in accordance with the EBA's FINREP reporting requirements. Impairments include provisions.

A development since the last Review has been the impact of increasing pension deficits on the capital base of a number of banks. A decline in yields on bonds used to discount Irish retail banks' defined benefit pension schemes has led to an increase in pension deficits – which has a negative impact on banks' own funds. Nevertheless, overall capital ratios have improved. The aggregate transitional common equity Tier 1 ratio increased by almost one per cent between March and September 2016, at which time it stood at 17.5 per cent. Other solvency ratios have increased in line with this. (Box 6 considers recent stress tests on Irish banks.)

Irish retail banks' fully-loaded ratios were broadly unchanged between 2015Q4 and 2016Q3. During this time aggregate fully-loaded capital declined by 4.6 per cent – mainly due to the aforementioned developments in pension deficits. Its impact on the common equity-tier 1 ratio was offset by a reduction in RWAs (Chart 58). Both transitional and fully-loaded ratios remain vulnerable to adverse valuation movements in pension liabilities and in available-for-sale asset values.

The Central Bank of Ireland is the national designated authority responsible for setting the CCyB rate on Irish exposures. To date, the Central Bank has maintained a rate of 0 per cent largely reflecting the relatively weak credit environment. Year-on-year credit growth to the private non-financial sector remains negative, notwithstanding increases in new lending. The credit gap has a prominent role in the European CCyB framework. While the role of MNCs in the Irish economy poses challenges regarding the use of the credit gap in the Irish case, a range of gap indicators analysed by the Central Bank, including a national-specific approach based on bank credit, shows the gap to be negative (Chart 59).

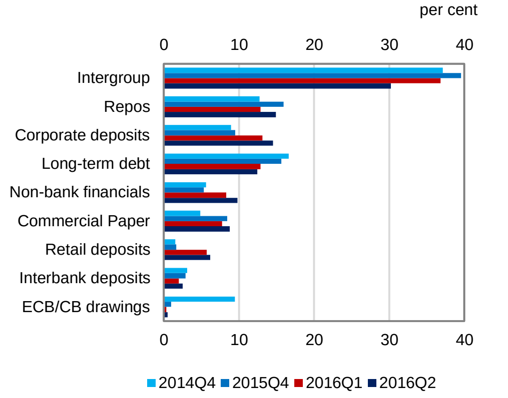
The O-SII framework in Ireland was introduced in 2015 with the identification of AIB and BOI as systemically important and with a buffer rate of 1.5 per cent to be phased-in between 2019 and 2021. The list of O-SIIs and buffer rates must be reviewed on an annual basis. The results of the 2016 review were announced on 14 November 2016.[65] Following this review, seven institutions are identified as systemically important in Ireland and buffer rates have been applied to these institutions. The increase in the numbers of institutions identified as systemically important in 2016 versus 2015 reflects the Central Bank, in aligning with other national authorities, and thereby ensuring consistency and harmonisation between each national authority, has fully followed the EBA Guidelines.

Foreign-owned resident banks

Foreign-owned banks' total assets increased by almost 30 per cent in the year to June 2016. This was primarily due to the restructuring of certain banks' global operations which included

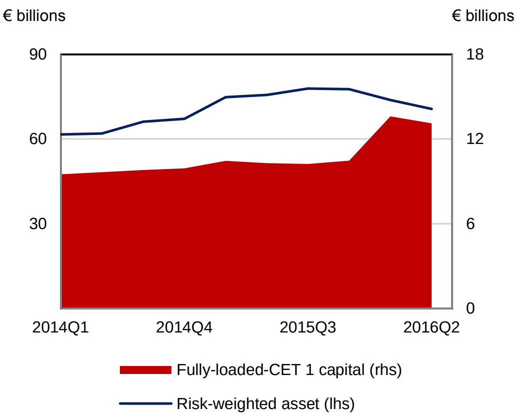
[65] For further information on the results of the 2016 review, see http://www.centralbank.ie/STABILITY/MACROPRUDENTIALPOL/Pages/OtherSystemicallyImportantInstitutions(O-SII).aspx

Chart 61: Foreign-owned banks' funding breakdown



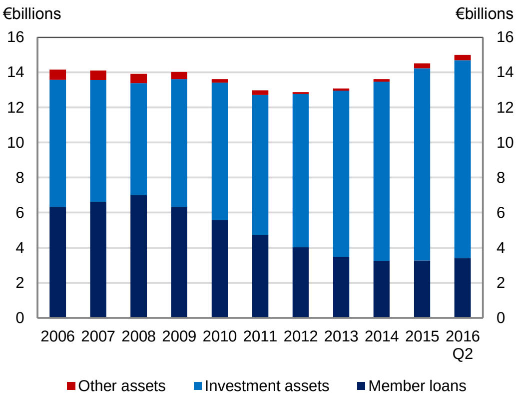
Source: Central Bank of Ireland.
Notes: Data are consolidated.

Chart 62: Foreign-owned banks' fully-loaded common equity Tier 1 capital and risk-weighted assets



Source: Central Bank of Ireland.
Notes: Data are collected in accordance with the EBA's COREP reporting requirements. Data are consolidated.

Chart 63: Breakdown of credit unions' total assets



Source: Central Bank of Ireland.
Note: Member loans are net of impairment provisions.

the transfer of activities to an institution located in Ireland in early 2016. Controlling for this one-off adjustment, the remaining foreign-owned entities continued to deleverage. The business models of foreign-owned retail banks differ from Irish retail banks reflected in debt securities being the largest category of assets held by them, accounting for 48 per cent of total assets at end-June. Loans and advances accounted for just over one-third of total assets.

Profitability was also affected by a large transfer of assets. The level of pre-tax profits increased by 10 per cent between 2015H1 and 2016H1 to €578 million (Chart 60). This growth was mainly driven by a 34 per cent increase in fee and commission income. However, after adjusting for the one-off impact of the transfer of assets, profitability declined. Return on assets decreased from 2.6 per cent in 2015H1 to 2.2 per cent in 2016H1.

Although declining in recent quarters, intragroup support remains the largest funding source for foreign-owned banks, accounting for 30 per cent of total funds at 2016Q2 (Chart 61). This type of funding is generally stable but it can act as a channel for contagion if the parent entity experiences any negative shocks. At end-June 2016, over 43 per cent of total funding had a maturity of one month or less, remaining relatively unchanged from the last Review.

In aggregate, foreign-owned banks' fully-loaded common equity Tier 1 capital declined by 9 per cent between 2015Q4 and 2016Q2 (Chart 62). RWAs increased by just over 25 per cent during this time. The majority of these movements may be attributed to the aforementioned transfer of assets of one institution in early 2016. As a result, the aggregate fully-loaded common equity Tier 1 capital ratio declined by 8 percentage points to 21.6 per cent in the six months to 2016Q2.

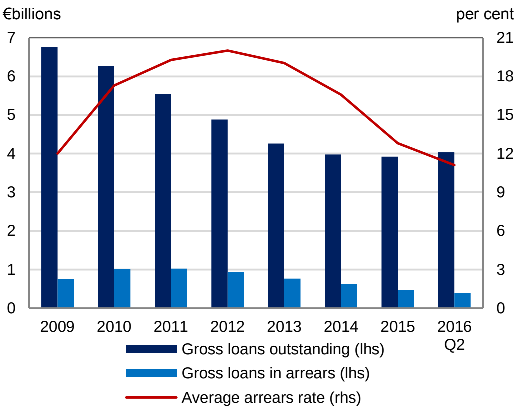
The vote by the UK to leave the EU could have an impact on the landscape of foreign-owned banks operating in Ireland. A number of UK banks currently operate here, some of which provide important services to the domestic economy and, in some instances, directly compete with Irish banks. The ability of these banks to continue to operate within Ireland will depend on the outcome of the Brexit negotiations. At the same time, Ireland may be the preferred location of some UK banks that choose to relocate within the EU.

Credit unions

The increased pace of restructuring in the credit union sector which was evident in 2015Q4 continued into 2016. There were 318 registered credit unions and 291 active credit unions at end-October 2016. By the end of 2016, the number of credit unions is projected to be closer to 280.

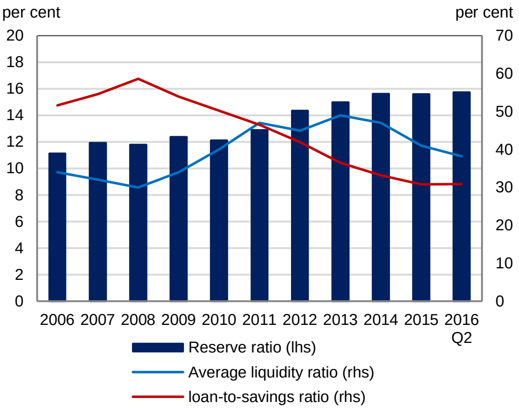
Since returning to positive growth in 2012, total assets have increased by 14 per cent. More recent growth in total assets has been evenly spread across the two main asset classes: investments and loans. Total investments, which account for 72

Chart 64: Credit unions' member loans and arrears



Source: Central Bank of Ireland.
Notes: Arrears refer to members' loans that are more than nine weeks in arrears.

Chart 65: Credit unions' reserves and liquidity ratios



Source: Central Bank of Ireland
Note: the reserve ratio is calculated as realised financial reserve expressed as a percentage of total assets. Average liquidity ratios is calculated as liquid assets - assets held by a credit union to enable it to meet its obligations as they arise - as a percentage of unattached savings.

per cent of total assets, increased by 2.9 per cent in the six months to 2016Q2 (Chart 63). The concentration of assets in investments poses its own risk, increasing the interlinkages between credit unions and other aspects of the financial system – in particular, the banking sector. Such connections can lead to the propagation of vulnerabilities in extreme cases.

Lending increased in the six months to June 2016. Overall, the loan book increased by 3 per cent in 2016Q2. There has also been a shift in the duration of new loans with increased lending in the over-five year and over 10-year loans, particularly in the larger credit unions. The recovery in lending reflects improvements in the domestic economy. There was also a reduction in the number of credit unions which are subject to lending restrictions. At the start of 2015, over half of credit unions were subject to lending restrictions. However, many credit unions have made an effort to meet requirements on credit risk management resulting in the restrictions being lifted in many cases. Currently, the share of credit unions that are restricted has declined to around 25 per cent. Credit unions still have a sizeable book of NPLs (Chart 64). The average arrears rate of the sector was 11.1 per cent in 2016Q2.

The low interest-rate environment has led to a decline in yields on many investment classes and deposit products offered by competing financial institutions. At the same time, credit union dividends have also declined. The large share of assets many credit unions hold in investments poses a significant vulnerability to future returns. Many credit unions face a significant drop in income as longer term products mature and are reinvested at significantly lower rates. Analysis conducted by the Central Bank indicates that almost half of all credit unions could face overall losses based on projections from 2015 to 2018.[66]

Despite lower dividends, member savings continue to increase, growing by 3 per cent in 2016Q2. The average liquidity ratio stood at 38.2 per cent in 2016Q2 (Chart 65). While this represents a small decline compared to end-2015, it is well above the regulatory minimum of 20 per cent. The loan-to-savings ratio has remained broadly unchanged since the last Review (Chart 65). The lower the ratio, the higher the share of total funding that stems from unattached savings – thereby increasing liquidity risk.[67]

Total reserves increased by close to 4 per cent since the end of 2015. Reflecting the growth in assets, the sector's reserve ratio has changed little since the last Review, standing at 15.7 per cent in 2016Q2 (Chart 65). The number of credit unions reporting reserve ratios below the regulatory minimum of 10 per cent declined from nine in December 2015 to six in June 2016.

[66] The scenario is based on certain assumptions which incorporate an estimate of the possible future rates of return on investments, projected dividends similar to those proposed for the 2015 year end and assuming the current asset mix of loans/investments remains the same over the projected 3 year period from 2015 to 2018.
[67] Unattached savings are deposits which are not attached to loans or otherwise pledged as security and can be withdrawn by members – in many instances, on demand.

Box 5: Borrower-lender engagement in the mortgage market

An understanding of the evolution of engagement between lender and borrower in the Irish mortgage market over time is helpful to understanding how mortgage arrears on Irish banks' balance sheets will be resolved. Policy measures and initiatives by Irish mortgage lenders can only take effect in cases where borrowers are facilitated to engage with the process and a proactive approach is taken by lenders to seek to assist borrowers to meet their mortgage obligations. This box provides and discusses data on the extent of borrower engagement over a four-year period up to 2016Q1. It uses a combination of Loan Level and SFS[1] data to examine the percentage of PDH borrowers that have engaged with their mortgage provider.[2] Given that it is a regulatory requirement for lenders to use an SFS to obtain specified financial information on the borrower's circumstances where that borrower is in arrears (or pre-arrears) in order to assess the borrower's financial position, we define "engagement" as the first point at which a borrower fills out an SFS.

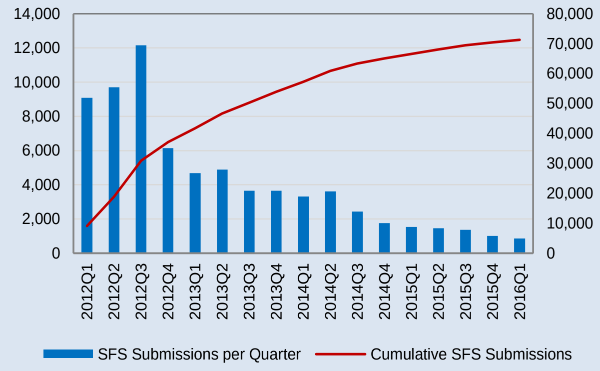
There are limitations to the usage of SFS engagement data as a proxy for borrower engagement. For example, the analysis relies on lender-reported data and as such cannot be treated as an exhaustive account of every SFS filled out. These limitations will skew downwards the estimate presented here of the absolute total number of engaged borrowers. Nonetheless, presentation of trends in engagement over time, as well as comparisons of engagement levels across arrears groups, remain instructive.

Chart A illustrates the number of borrowers who have engaged for the first time by quarter since 2012Q1. It shows that, as of 2016Q1, over 70,000 borrowers had engaged with their mortgage provider by filling out an SFS at these banks, the majority of which occurred in 2012. The tapering-off of engagement over time (there were fewer than 2,000 new engagements per quarter in 2015) reflects the improving economic environment since 2012 which has meant that the flow of new mortgages into arrears has been slowing down significantly since.

Chart B shows the percentage of borrowers in a given arrears category who had engaged with their mortgage provider at a given point in time[3] (data with a split between one and two year arrears are available only after mid-2014). It provides an estimate of the "cumulative engagement" achieved within each cohort of in-arrears borrowers over time. Engagement is at its highest in the 181-360 DPD category, where 53 per cent of such borrowers had engaged by 2015Q4. The 361-720 DPD and 91-180 DPD categories, however, are not far behind by way of level of engagement.

It is borrowers in arrears of less than 90 DPD and of greater than 720 DPD who display the lowest levels of engagement with their lender, with less than 40 per cent of both categories having SFS files submitted to the Central Bank by 2016Q1. The reasons behind this low level of engagement are likely different across these two groups. Among the early-arrears cases, low levels of engagement may be explained by borrowers believing they will "self-cure" and return to repayment due to improved financial circumstances or delays by lenders in engaging with these borrowers or processing SFSs. There may also be a delay for borrowers, in that it is not until they have reached higher levels of arrears that they believe that engagement and possible modification are necessary. Finally, even in cases where borrowers are engaged with their lender, it may take some time after the point of first engagement for the completed SFS to be submitted. For loans in arrears of more than 720 days, on the other hand, a lack of engagement is likely to be reflective of difficulties facing banks and policy makers in arriving at sustainable solutions for those with the most distressed balance sheets. This may be due in part to the challenging nature of the financial situations of many borrowers in this category, as well as the lack of willingness to engage on the part of some borrowers.

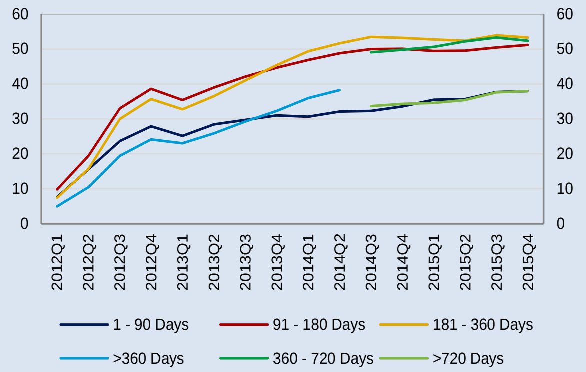
Chart A: Evolution of borrower-lender engagement , 2012Q1-2016Q1



Source: SFS
Notes: Primary axis is the number of SFS submissions per quarter. The secondary axis is the total number of SFS submissions

Chart B: Engagement by arrears buckets, 2012Q1 - 2015Q4

per cent per cent



Source: SFS
Notes: The horizontal axis shows the percent of loans in arrears bucket that have engaged with their lender

[1] The SFS is the document which a lender must use to obtain financial information from a borrower in order to complete an assessment of that borrower's case. The SFS was introduced in 2011 and data have been submitted to the Central Bank of Ireland since 2012Q1.
[2] Both data sources are collected by the Central Bank of Ireland and include data from Allied Irish Banks, Bank of Ireland and Permanent TSB.
[3] This is calculated by taking the number of loans by arrears bucket in each quarter from the Loan Level Data. Each loan is then flagged when a SFS is submitted. This is counted for every subsequent quarter to get the number of SFS arrears loans by bucket. The percentage of engaging borrower loans by arrears bucket is then calculated.

Box 6: Recent stress tests on Irish banks

Bank stress tests are an essential tool for supervisory and financial stability purposes. Banks in Ireland are regularly subjected to different stress tests, either directly by the Central Bank or by international bodies such as the IMF, EBA or SSM. This box summarises the main findings from the 2016 EBA stress test and the 2016 FSAP solvency stress test.[1]

EBA Stress Test:

In 2016, the EBA, in cooperation with the ECB, ESRB, EC, and the competent authorities from all relevant national jurisdictions, carried out a stress test of 51 EU and EEA banks. The stress test was designed to assess the resilience of the EU banking sector in a consistent way under a baseline and a hypothetical adverse economic scenario. The sample of banks included in the stress test covers 70 per cent of the banking sector in the EU but included only large banks.[2] Similar to previous EBA exercises, the stress test yielded substantial data on the 51 banks, allowing direct peer comparison. Chart A compares the capital position (current and under the two scenarios) of the Irish banks covered by the exercise[3] to those in other EU Member States with large banks. The key findings were:

- On a fully-loaded basis, the aggregate CET1 capital ratio of Irish banks subject to the stress test is slightly below the average capital ratio of all banks in the sample.
- The impact of the adverse macroeconomic scenario was relatively more severe for Ireland than for other countries. This is reflected in Chart A by the larger distance between the baseline and adverse CET1 capital ratios for Ireland.

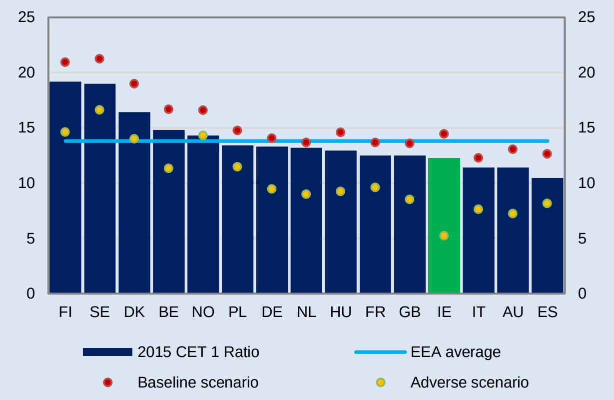
IMF FSAP Stress Test:

In July 2016, the IMF published its Financial Sector Stability Assessment for Ireland following completion of the IMF's FSAP review. The FSAP is a comprehensive and in-depth assessment of a country's financial sector and is typically conducted every five years. It focused on the resilience of Ireland's financial sector, the quality of the regulatory and supervisory framework, and the capacity of competent authorities to manage and resolve financial crises. One element that forms part of all country FSAPs is a solvency stress test. The IMF, in conjunction with the Central Bank of Ireland, conducted both top-down and bottom-up stress tests under three different scenarios (Baseline, Moderate Stress and Severe Stress). These scenarios reflected mainly external risks and domestic vulnerabilities. The key findings were:

- The Irish banking sector's aggregate core Tier 1 capital ratio was estimated at 15 per cent under the baseline scenario in the FSAP assessment (see Chart B).
- Similar to EBA findings, core Tier 1 capital declines considerably under the two adverse scenarios, highlighting that the Irish banking system remains vulnerable to stress events.

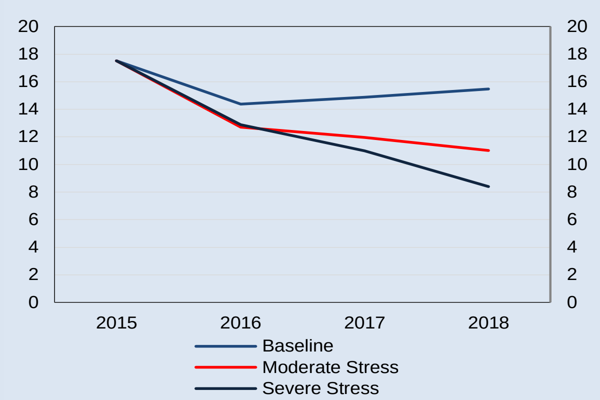
In summary, two published stress tests on Irish banks were conducted in 2016: the EBA stress test and the IMF FSAP solvency stress test.[4] Both indicate that the Irish banking sector is adequately capitalised but remains vulnerable to shocks. Additionally, both stress tests highlight that legacy issues on the banks' balance sheets continue to influence the sector's performance.

Chart A: EBA Stress Test – common equity Tier 1 capital



Source: EBA Stress Test 2016
Note: The red dots represent the CET1 ratio under the baseline scenario in 2018 and the yellow dots the adverse scenario in 2018. The bars show the current CET1 ratio as of end-2015 by country and the blue line is the average actual CET1 ratio across all banks at that time.

Chart B: IMF FSAP – fully-loaded core Tier 1 capital



Source: IMF Country Report No. 16/258, July 2016

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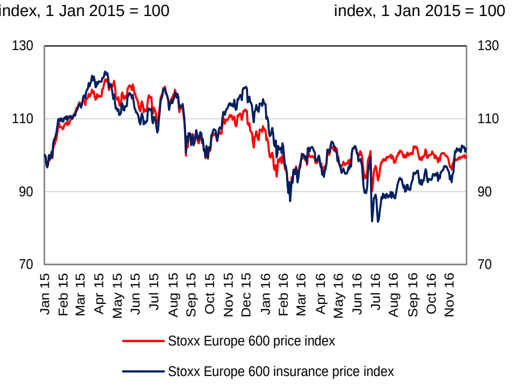
[1] See the http://www.eba.europa.eu/risk-analysis-and-data/eu-wide-stress-testing for full details of EBA stress test and https://www.imf.org/external/pubs/cat/longres.aspx?sk=44305.0 for details of the IMF FSAP report on Ireland.
[2] Banks with more than €30bn in consolidated assets.
[3] Irish banks in the EBA sample included The Governor and Company of Bank of Ireland and Allied Irish Banks plc.
[4] The third stress test conducted by the SSM, which ran concurrently to the EBA stress test, is not publicly disclosed but is used to inform supervisory actions through the annual supervisory review and evaluation process (SREP).

4.2 Insurance sector

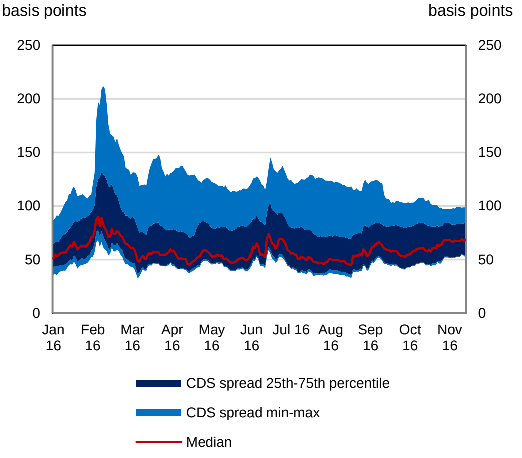
The domestic non-life insurance sector continues to face profitability challenges. All of the domestically-focused high-impact firms reported underwriting losses in the first half of 2016, albeit at lower levels than in the same period in 2015, mainly arising from developments in the Irish motor insurance market. Although economic conditions support a recovery in the domestic life insurance sector, a competitive operating environment presents a challenge to firms in generating profitable new business. Most insurance firms are likely to be affected by market volatility and any adverse effects on economic conditions arising from Brexit. Solvency II came into effect on 1 January 2016 with the intention of improving risk management practices in firms and supporting the resilience of the insurance sector in the medium to long-term.

Chart 66: Eurostoxx 600 and insurance equity indices



Source: Thompson Datastream.
Notes: Last observation: 30 November 2016.

Chart 67: CDS spreads of insurance groups with a presence in Ireland



Source: Bloomberg.
Note: Sample comprises Axa, Allianz, Zurich, MetLife, Hannover Re, and Berkshire Hathaway. Last observation: 30 November 2016.

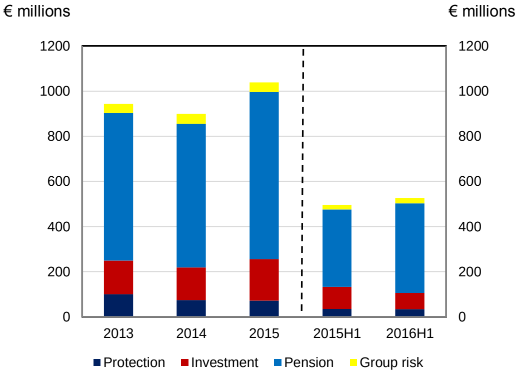
The insurance sector in Ireland comprises life, non-life and reinsurance firms operating across a range of product and geographical markets. Insurance firms based in Ireland generated €76 billion of premium income in 2015, of which €61.9 billion related to foreign-risk business. In general, those firms with significant international business do not operate in the domestic market, with the exception of Zurich Group.[68] The majority of insurance firms regulated in Ireland are subsidiaries of large international insurance groups.[69] While such firms benefit from the support of parent companies, they may also be affected by any adverse shocks which have an impact on other parts of the group.

At a European level, financial market sentiment towards insurers has deteriorated as the weak macroeconomic environment and ongoing low interest rate environment affect firms' profitability. [70] Equity prices for the insurance sector have been on a downward trend, albeit with a modest reversal in recent months (Chart 66). CDS spreads have been widening as greater solvency risks are priced in (Chart 67).[71] Nevertheless, insurance markets across countries are heterogeneous in nature so that firms' performances are affected to varying degrees depending on a combination of business mix, average guaranteed returns and the duration gap.[72,73]

Most insurance firms established in Ireland will be affected by market volatility and any adverse effects on economic conditions arising from Brexit. It is uncertain how the UK's exit from the EU will affect the structure of the sector in Ireland. Whilst the majority of local insurers are Irish based, there are some key firms who write on a branch basis who may need to seek establishment. The majority of business sold by Irish authorised companies into the UK is sold by cross-border entities that sell little or no business in Ireland, with the exception of certain

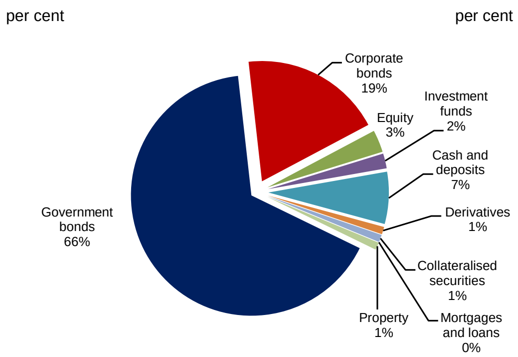
[68] Zurich Group is one of the top four players in both the domestic life and non-life markets.
[69] Six of the nine global insurers designated as globally systemically important insurers (G-SIIs) by the Financial Stability Board have operations located in Ireland.
[70] See EIOPA Risk Dashboard, March 2016.
[71] See IMF Global Financial Stability Report, October 2016.
[72] See ECB Financial Stability Report, May 2016.
[73] The duration gap measures how well matched are the timings of cash inflows (from assets) and cash outflows (from liabilities).

Chart 68: Premium income of domestic life insurers



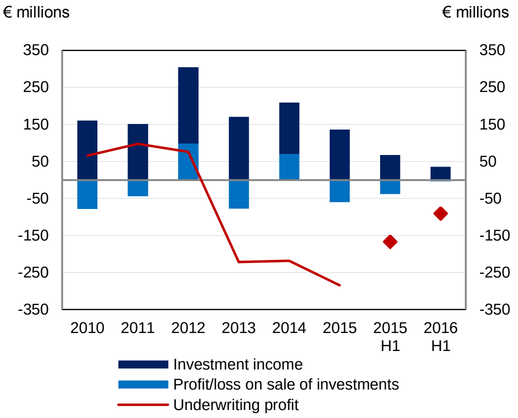
Source: Central Bank of Ireland.
Notes: Premium income is measured by new business APE. Data are for the four largest domestically-focused life insurers.

Chart 69: Non-linked assets of domestic life insurers



Source: Central Bank of Ireland.
Notes: Data as at end-June 2016. Total non-linked assets valued at €12,579 million.

Chart 70: Non-life insurers' underwriting profits and investment income and gains



Source: Central Bank of Ireland.
Notes: Data are an aggregation of domestically focused high-impact firms who collectively write approximately 80 per cent of Irish-risk business. Profit/loss on sale of investments includes realised and unrealised gains and losses.

domestic non-life firms writing business in Northern Ireland and Zurich Insurance, which has a significant UK branch. Some firms may have to adjust their business model in the longer term by, for example, setting up a UK third country branch or transferring their business to a subsidiary or sister group entity. An increasing number of global insurance groups are considering seeking a new authorisation in Ireland, particularly to locate their headquarters for European business in Ireland rather than the UK.

Life sector

Although economic conditions support recovery in the domestic life insurance sector, a competitive operating environment presents a challenge to firms in generating profitable new business. Ireland's demographic structure and the opportunities to increase private pension provision present longer-term opportunities for the sector.

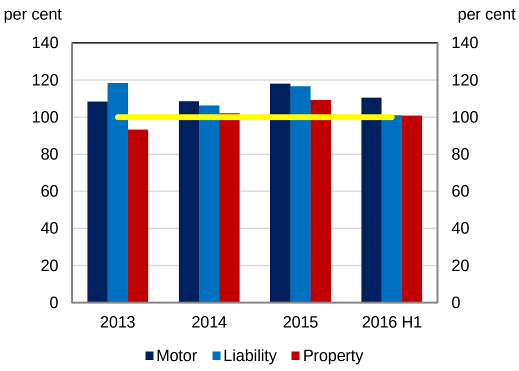
The domestic life insurance market is dominated by six firms, four of which are regulated by the Central Bank and two of which operate in Ireland on an FOE basis.[74] The market share of the four domestically-regulated firms has declined from over 80 per cent in 2014 to 70 per cent in 2016 reflecting competition within the sector. The impact that Brexit may have on the structure of the sector is as yet uncertain. The domestic life firms have little direct exposure to the UK in terms of business written and investment holdings. They, however, may be affected by any adverse effects on the Irish economy arising from Brexit.[75]

The premium income of domestic life insurers increased by 5.8 per cent in 2016H1 compared to the same period in 2015 (Chart 68). The pension market, which accounts for the largest proportion of the sector's business, saw a larger increase than other lines of business. However, this was mainly due to the movement of two large corporate schemes from the non-insured pension sector to the life insurance sector. There has been a significant decline in the demand for annuities due to the low interest rate environment.

The premium income of the retail protection business declined further in the first half of 2016 compared to the same period in 2015 prompting domestic life firms to reverse previous decisions not to compete actively on price. At an industry level, this has reduced the profitability of what is already a low-margin business line. The retail investment business of the sector declined by 26.7 per cent in the same period. Market volatility may be prompting potential policyholders to postpone investment decisions. Competition from other savings-and-investment product providers is also a contributory factor.[76] Nevertheless,

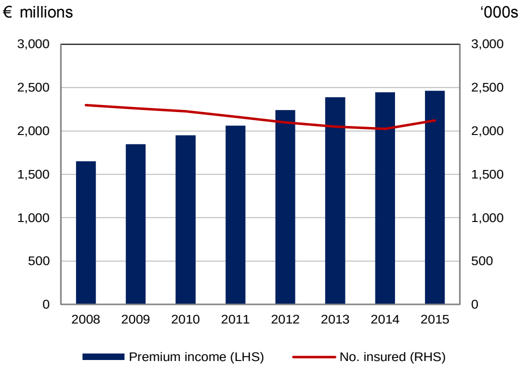
[74] Analysis of the domestic life insurance market is based on the four largest domestically-focused firms which comprise over 70 per cent of the market. However, the data are only indicative of the markets these firms operate in, given that other non-insurance firms offer similar products, particularly in the non-protection business. Detailed data are not available for firms operating in the domestic market on an FOE basis.
[75] On average, 98 per cent of domestic life insurers' holdings of non-linked assets are euro-denominated.
[76] Those other product providers include asset management companies, non-insured pension providers, investment funds and exchange-traded funds, as well as insurance intermediaries and retail banks offering insurance products.

Chart 71: Non-life insurers' combined ratio



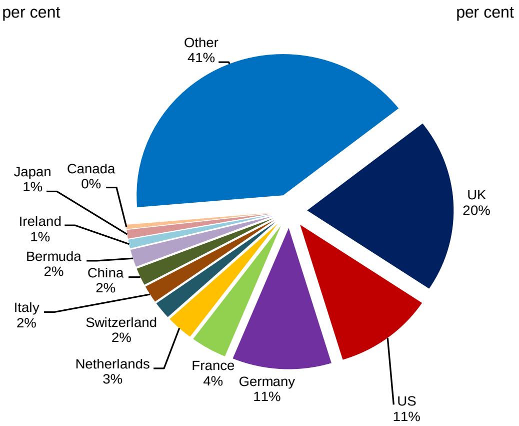
Source: Central Bank of Ireland.
Notes: Combined ratios are calculated as the cost of incurred claims and expenses as a percentage of earned premium income. A combined ratio below 100 per cent indicates that a company is making an underwriting profit, while a ratio above 100 per cent means that the cost of claims is greater than the premium earned, resulting in an underwriting loss. The sample comprises high-impact firms.

Chart 72: Premium income of health insurance firms



Source: Health Insurance Authority.

Chart 73: Reinsurance non-life premium by location of risk



Source: Central Bank of Ireland.
Notes: Data are for 2015.

lapses continue to decline across the sector as firms increasingly focus on business retention to secure medium-term profitability.

Domestic life insurers are well capitalised on a Solvency II basis. Firms have made little use of the transitional measures available under Solvency II which allow firms to move to full implementation of capital requirements over a period of time.[77] Unit-linked products, which comprise approximately 90 per cent of domestic insurers' assets under management, are less capital-intensive than guaranteed return investment products, as they carry no interest-rate risk for the firm.[78] Unlike its predecessor, Solvency I, there are no prescriptive limits under Solvency II regarding which assets can be used to cover solvency requirements. At end-June 2016, there was no evidence of a shift by firms to riskier assets as they continue to invest predominantly in fixed-income securities (Chart 69).

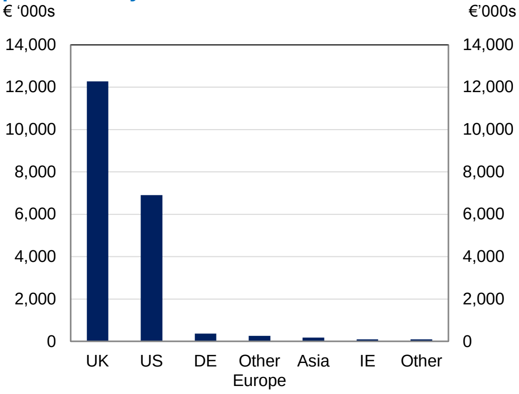
The cross-border life insurance sector is approximately three times the size of the domestic market with total premium income of €28.6 billion in 2015, with annual growth slowing to 7 per cent compared to 24 per cent in 2014.[79] The firms' main markets are Italy and the UK and the predominant product offering is unit-linked investments. The sector may be adversely impacted by a decline in economic growth in these countries, any changes to the tax benefits associated with the products offered, and the nature of Brexit. VA firms also operate in this sphere and generated over €2 billion of the total €28.6 billion premium income.[80] The sustainability of the VA business model is unclear at this time as the low interest rate environment has negatively affected the profitability of firms' legacy books of guaranteed products and creates challenges for firms in offering new products which are both profitable and attractive to policyholders.

Non-life sector

The domestic non-life insurance sector continues to contend with operating challenges. All of the domestically-focused high-impact non-life firms reported underwriting losses in the first half of 2016 on their domestic and foreign business, albeit at lower levels than in the same period in 2015 (Chart 70). These losses are primarily due to recent developments in the Irish motor market, which accounts for 48 per cent of the sector's Irish-risk business. A number of changes in the claims environment have been contributing to greater claims costs, including increases in both claims frequency and average claims costs.[81] Although rising premium rates are now beginning to offset the increasing

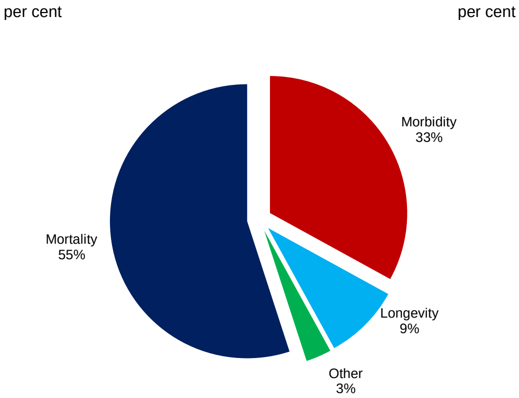
[77] The purpose of the transitional measures is to lessen the immediate impact of the new rules so that, for example, large increases in technical provisions or capital requirements can be brought in over time, allowing firms to fund them gradually rather than all in one go. The transitional measures are found in Articles 308b, 308c and 308d of the final version of the Directive.
[78] Unit-linked products are investment products whose returns are directly linked to market performance and investment risk is borne entirely by the policyholder.
[79] This activity is conducted by firms located in Ireland but selling insurance in other EU countries on a FOS or FOE basis. The cross-border operations of life and non-life insurance firms is facilitated by European legislation whereby undertakings authorised to perform insurance activities in the Member State where their head office is located can also operate, under FOS or FOE (through a branch office), in other Member States. This allows firms regulated in Ireland to sell insurance in other EU Member States and, in addition, insurers authorised in the EU can write business in Ireland.
[80] Variable annuities are life insurance products with investment guarantees.
[81] Increased economic activity and miles travelled have contributed to increases in claims frequency. Factors contributing to increases in average claims costs include changes in court limits, the introduction of Periodic Payment Orders and lower discount rates as a result of the Russell Judgement.

Chart 74: Reinsurance life gross technical provisions by location of risk



Source: Central Bank of Ireland.
Notes: Data are for 2015.

Chart 75: Global life reinsurance business mix



Source:Standard and Poors.

cost of claims, the combined ratio for the motor book of business remains above 100 per cent (i.e., recording underwriting losses) (Chart 71). The combined ratios of the property and the liability books of business have also improved over the first half of 2016, with both falling to 101 per cent.

The sector's response to these underwriting losses, by raising premium rates, is typical of the underwriting cycle.[82] Although there have been substantial increases in motor premium rates since 2014, motor premium income of the high-impact non-life firms did not increase to the same extent.[83,84] The higher premium rates have resulted in reduced cover being taken up by policyholders and a loss of business for some firms. Those operating in the domestic market on a branch (or FOE) basis saw increases in aggregate motor premium income in excess of premium inflation. The presence of MGAs in the sector is an additional source of competition in the market.[85] MGAs facilitate insurers located outside the domestic market in entering it without having to bear the cost of establishing operations in the State.

Some high impact firms may have to adjust their business model in the longer term in response to the UK's withdrawal from the EU. Between 15 per cent and 32 per cent of the firms' business is written in the UK, particularly into Northern Ireland.

The domestic non-life insurance sector has also been affected by the low interest rate environment. Insurers' investment portfolios predominantly comprise fixed-income assets, such as sovereign and corporate bonds, the interest income from which has been declining over time (Chart 70). This poses challenges for domestic non-life firms who have increasingly relied on investment income to offset poor underwriting performance and to bolster overall profitability. A prolonged low yield environment is likely to result in a continuation of declining investment income as proceeds from maturing assets are reinvested in lower-yielding assets. However, the short-term nature of non-life insurers' products helps to lessen firms' interest-rate sensitivity as firms can reprice contracts to offset pressure on income.[86] This may, in part, explain the lack of any significant change in firms' investment asset allocations to date. Nevertheless, Solvency II capital requirements and a continuation of the low interest rate environment may prompt firms to revise their investment asset allocations to enhance returns, possibly through increased credit and liquidity risk.[87] The overall solvency position of the sector is high. Firms took action in recent years to strengthen their balance sheets in preparation for the

[82] The tendency for insurance premiums and profits to rise and fall over time is described as the underwriting cycle. A cycle begins when insurers tighten their underwriting standards and raise premiums after a period of severe underwriting losses or negative shocks to capital (e.g., investment losses). Stricter standards and higher premium rates lead to an increase in profits and accumulation of capital. The increase in underwriting capacity increases competition, which in turn drives premium rates down and relaxes underwriting standards, thereby causing underwriting losses and setting the stage for the cycle to begin again.
[83] Annual premium inflation in the motor sector averaged 33 per cent in the 6 months to June 2016 as measured by the private motor insurance component of the CSO's CPI.
[84] In aggregate, high-impact firms' motor premium income increased by 9 per cent in 2015, while some of these firms experienced declines in motor premium income of up to 5 per cent.
[85] An MGA, is a wholesale insurance intermediary with the authority to accept placements from (and often to appoint) retail agents on behalf of an insurer. MGAs receive commission on the insurance sold and are not liable in the event of the insurer being unable to pay out on claims.
[86] See IMF Global Financial Stability Report, April 2016, Chapter 3 – The Insurance Sector – Trends and Systemic Risk Implications.
[87] See Standard Life Investments (2016), *European Insurance Investment Survey*. According to this survey of European insurers, the respondents of which included Irish firms, 50 per cent of insurers are expecting to decrease sovereign fixed income exposure, 43 per cent expect to increase their investment risk appetite and over 60 per cent of insurers expect to increase allocations to real estate and / or alternatives.

requirements of Solvency II.

The health insurance sector is a significant component of the non-life insurance sector, generating €2.45 billion premium income in 2015 (Chart 72). The sector has undergone structural change in recent years with new providers entering the market, merger and acquisition activity occurring as well as the introduction of the Risk Equalisation Scheme and Lifetime Community Rating.[88] The sector has increased premium income in recent years while the number of policyholders declined. It will face challenges in the future in maintaining affordable premiums against the background of a deteriorating claims environment attributable to medical inflation, high-tech and high-cost treatments and an ageing population.

Reinsurance sector

The reinsurance sector in Ireland is an internationally-focused sector with few direct interlinkages with the domestic financial system. Irish firms generated €20 billion in premium income in 2015 which was evenly split between life and non-life business. It is predominantly foreign-risk business (Chart 73 and Chart 74).

The reinsurance sector continues to be viewed with a negative outlook at a global level by three of the four main rating agencies as challenges to the sector's operating environment persist.[89] There are some signs that the weak demand for reinsurance from primary insurers is changing. Reinsurance was typically purchased by insurers to cover tail risk but the introduction of risk-sensitive regulatory regimes, such as Solvency II, may entice primary insurers to buy more reinsurance as a means of reducing capital requirements.

In the non-life reinsurance sector, the below-average catastrophe losses and the releasing of reserves has supported firms' profitability over recent years. Catastrophe losses in the first eight months of 2016 exceeded total losses for 2015 but are still below the 10-year average.[90] An end to declining catastrophe losses could limit the potential for ongoing reserve releases to support profitability. The low interest rate environment is also having a two-fold impact on the sector's profitability. Investment income continues to decline and there is downward pressure on prices as supply of capital in the sector exceeds demand for reinsurance.[91] This excess capacity is prompting firms to diversify into speciality lines of business such as cover for US mortgage default exposure and cyber risk.

The outlook for the global life reinsurance sector is somewhat more positive than for the non-life sector.[92] The combination of retirement demographics, low interest rates, and increasing

[88] At present the sector comprises three "open enrolment" providers of health insurance and restricted membership undertakings. Open enrolment providers are VHI Insurance Dac, Irish Life Health and Laya Healthcare. Restricted Membership undertakings, for example, Gardaí, ESB and Prison Officer Schemes accounted for €116 million of the total premium income.
[89] Rating agencies with negative ratings are Moody's, Fitch and A.M. Best. See A.M. Best's Special Report "Innovation: the race to remain relevant", 5 September 2016, Fitch Ratings: Reinsurance Outlook Weakens, September 2016, Moody's: Stable global life and P&C insurance outlook for 2016; reinsurance outlook remains negative, December 2015. Standard & Poor's has a stable rating outlook on the sector.
[90] See AON Benfield's Reinsurance Market Outlook, September 2016.
[91] According to AON Benfield's Reinsurance Market Outlook, September 2016, overall reinsurance capital has increased by more than 70 per cent since 2008. The low interest rate environment is affecting reinsurers' traditional capital as increasing unrealised gains on investments increase capital values and institutional investors are increasingly investing in insurance risk in a search for yield.
[92] See S&P Global Reinsurance Highlights 2016.

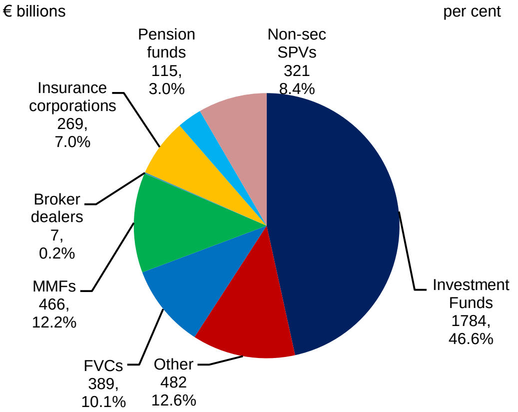
longevity are increasing the demand for life and annuity reinsurance, as are opportunities in EMEs.[93] The impact of the low interest rate environment on the life reinsurance sector is less severe than on the global life insurance market given that it predominantly covers risks such as mortality, morbidity and longevity rather than market risks typically associated with savings and retirement products (Chart 75).[94] The global life reinsurance sector is highly concentrated with the top six firms accounting for more than 90 per cent of the life reinsurance market. While the concentration of players in the market may increase counterparty risk for direct life insurance firms, the barriers to entry that exist may provide stability to the incumbent firms.

[93] See S&P Global Reinsurance Highlights 2016.
[94] See A.M. Best's Special Report "Innovation: the race to remain relevant", 5 September 2016.

4.3 Non-bank financial intermediaries sector

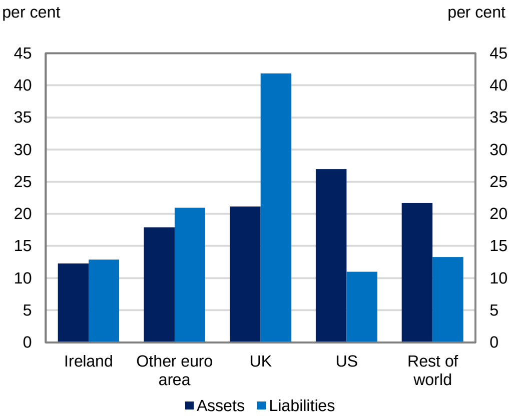
The Irish non-bank financial intermediary sector is characterised by a variety of financial activities with varying connections to other countries and financial sectors. Its size, including investment funds, money market funds and special purpose vehicles, was close to €3 trillion in Ireland at end-2016Q2. Non-bank intermediaries assist financial development and economic growth, through intermediation, risk diversification and promoting market efficiencies. Financial stability risks may arise, however, given the interlinkages of the sector with the international financial system. The Irish domestic economy has limited direct exposures to the sector, although any adverse developments in it could cause reputational damage to Ireland. The impact that the UK leaving the EU will have on the Irish investment fund landscape is uncertain. It is likely that some UK funds will seek to re-domicile elsewhere in the EU and that Ireland may be a jurisdiction of choice for some. The financial market volatility after the UK vote to leave the EU had a limited impact on investor flows vis-à-vis Irish funds.

Chart 76: Structure of the Irish non-bank financial sector



Source: Central Bank of Ireland.
Notes: Data as at 2016Q1, as 2016Q2 data are not available across all sectors. Total value of assets amounted to €3,801 billion. Insurance corporations are covered in section 4.2, while pension funds are regulated by the Pensions Authority.

Chart 77: Balance sheet location for IFs, MMFs and FVCs



Source: Central Bank of Ireland.
Notes: Data as of 2016Q2. Figures based on aggregate total assets and liabilities for IFs, MMFs and FVCs.

Overview

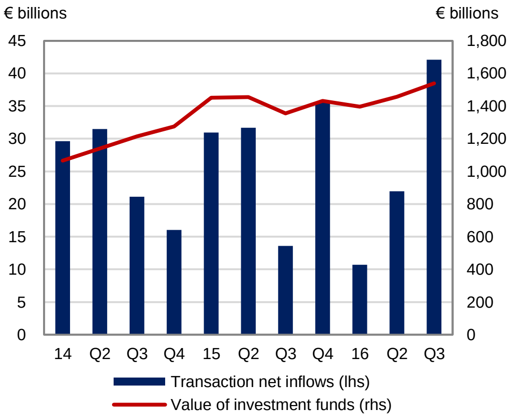
The Irish non-bank financial intermediary sector largely comprises funds and special purpose vehicles (Chart 76). The funds industry, namely IFs and MMFs, accounts for 58 per cent of the total sector. Securitisation vehicles, namely FVCs, and non-securitisation special purpose vehicles, account for almost 20 per cent. The "Other" sector represents the residual as derived from the national financial accounts total. Both in terms of assets and liabilities, potential exposures of IFs, MMFs and FVCs are linked primarily to jurisdictions other than Ireland, particularly the US (on the asset side) and the UK (on the liabilities side) (Chart 77).

The non-bank financial intermediation sector may provide an alternative or complementary channel to banking in contributing to economic growth through the diversification of risk and the efficient allocation of capital.[95,96] The EU's Capital Markets Union (CMU) initiative is being developed to maximise such benefits of non-bank financial institutions and capital markets to the real economy.[97] At a global level, the non-bank financial sector has expanded strongly in the current environment of low interest rates and strengthened bank regulatory requirements.

The growth of the non-bank financial sector since the financial crisis poses risks to financial stability.[98] To the extent that capital and liquidity regulatory requirements are tightened in the banking sector, financial activity may be displaced outside the regulated banking perimeter. Financial intermediation could potentially become more opaque, giving rise to discretionary risk-taking behaviour, including within non-bank entities linked to banks. Moreover, bank-like risks such as leverage, maturity

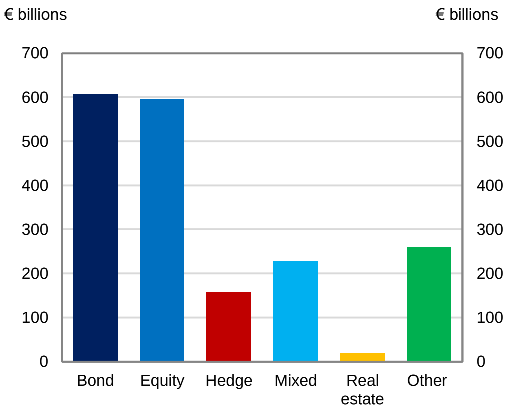
[95] See: Gambacorta, Yang and Tsatsaronis (2014), *"Financial structure and growth"*, BIS Quarterly Review, March.
[96] There is a considerable empirical literature analysing the implications of bank-based and market-based finance on economic growth and financial development. For a review of the literature, see: Bijlsma and Dubovik (2014), *"Banks, Financial Markets and Growth in Developed Countries: A Survey of the Empirical Literature"*, CPB Netherlands Bureau for Economic Policy Analysis Discussion Paper 266.
[97] See Box 8: Capital Markets Union (CMU) in Europe – Issues for financial stability analysis in MFR 2015:I.
[98] See ECB Financial Stability Report November 2016.

Chart 78: Net asset value of IFs' shares/units



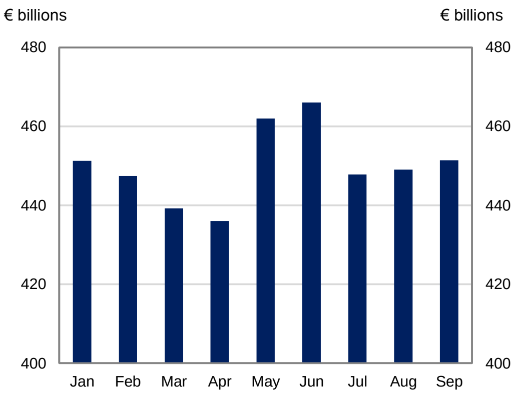
Source: Central Bank of Ireland.

Chart 79: IFs' total assets by fund type



Source: Central Bank of Ireland.
Notes: Data as of 2016Q3.

Chart 80: MMFs' total assets - 2016



Source: Central Bank of Ireland.

transformation and liquidity risk may also materialise in the case of non-bank financial intermediaries. At a global level, simultaneous reversals of large portfolio positions could have a significant impact on market prices and give rise to feedback-loop effects across a wide variety of markets and countries.

At a domestic level there is limited evidence of direct risks from the non-bank financial sector due to the international nature of the industry. (See Box 7 for details of Ireland's contribution to the FSB's monitoring exercise to track developments in the shadow banking system with a view to identifying the build-up of systemic risks and initiating corrective actions where necessary.)

In the period immediately following the outcome of the UK's referendum, financial markets experienced a degree of volatility as investors assessed the impact that the UK's decision to leave the EU would have on the economic environment. In line with this volatility, Irish funds denominated in sterling saw net investor outflows in July before recovering in August and September. It remains difficult to predict the impact that Britain leaving the EU may have on the Irish investment fund landscape. The terms under which Britain leaves the EU, the degree to which equivalent regulations apply thereafter, and the timing of the foregoing will influence developments. It is likely that some UK funds will seek to re-domicile elsewhere in the EU and that Ireland may be a jurisdiction of choice for some.

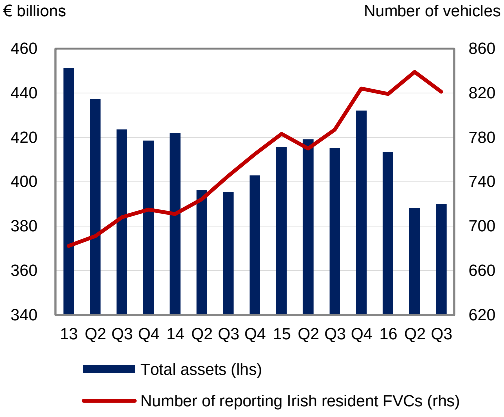
Investment funds

The net asset value of Irish domiciled IFs amounted to €1,539 billion as of 2016Q3 (Chart 78), representing a 14 per cent increase from 2015Q3. Net investor inflows increased strongly in 2016Q3, to €42 billion, from €33 billion over the first half of 2016. Revaluations, which capture the effect of currency and asset price movements on a fund's portfolio, turned negative in 2016Q1 but recovered over the following two quarters.

Investor flows to and from sterling-denominated funds suggest a limited impact arising from the UK referendum on EU membership. Global equity and currency market fluctuations around the time of the Brexit vote resulted in net investor outflows from sterling-denominated IFs of €5 billion in July. These were offset by investor inflows over the following two months, however, as equity markets recovered strongly. Investor flows into and out of sterling-denominated IFs broadly offset each other in the third quarter as a whole. US dollar- and euro-denominated IFs saw net inflows of €35 billion and €8 billion, respectively. Sterling-denominated IFs account for 21 per cent of Irish domiciled IFs as measured by total assets.

Financial stability risks arising from the IF sector depend on the type of fund, their funding structures and their investment portfolios. Bond and equity fund types account for 33 and 32 per cent of the sector, respectively (Chart 79). These fund types mostly adopt conservative investment strategies within the

Chart 81: Total assets and number of reporting Irish resident FVCs



Source: Central Bank of Ireland.

scope of Undertakings for Collective Investment in Transferrable Securities (UCITS) regulations. Mixed and hedge funds represent 12 per cent and 8 per cent of the sector, respectively, while real estate funds account for about 1 per cent.

Potential financial stability risks within IFs relate in large part to their susceptibility to runs.[99] If shares were to be redeemed in large volumes at short notice due to market fluctuations, this could potentially lead to a significant unwinding of portfolio positions and, possibly, an impact on market prices.[100] In particular, funds engaged in maturity and liquidity transformation could face mismatches between assets and liabilities. The degree of leverage may also represent a potential financial stability risk, particularly in the case of hedge funds, given their greater exposure to credit derivatives.

Money market funds

MMFs' total assets increased by 5 per cent in the year to end-2016Q3, from €428 billion to €451 billion (Chart 80). The low interest rate environment is increasingly affecting the performance of MMFs. In 2016Q3, debt securities held by MMFs amounted to €337 billion, of which 16 per cent (€53 billion) reported a negative yield. This compares to 5 per cent (€18 billion) in 2015Q3. Negative yielding securities further limit investor returns and the ability of MMFs to charge fees, while potentially increasing the challenges for MMFs in the future in the event of rising interest rates.

The Brexit vote appears to have affected MMFs quite differently to IFs, most likely reflecting flight-to-safety inflows. MMFs as a whole saw significant inflows in May and June in advance of the vote. Sterling-denominated MMFs saw net investor inflows of €7 billion in Q3, and euro-denominated MMFs experienced inflows of €6 billion.[101] US dollar-denominated MMFs saw net outflows of €6 billion in Q3, however, suggesting some increase in risk appetite amongst US dollar investors.

Potential financial stability concerns arising from the MMF sector mainly relate to wholesale funding. On-demand par redemptions can lead to the reversal of MMF portfolio investment in short-term bank debt and repo markets. In turn, this can lead to illiquidity in certain markets and further liquidity spirals[102] across sectors, as occurred in the commercial paper and repo markets during the 2007-2008 financial crisis. Nevertheless, as noted in the IMF's recent FSAP, Irish MMFs have substantial liquidity buffers. Looking ahead, managing the impact of monetary tightening will require ongoing prudent portfolio management.

Financial vehicle corporations

Total assets of Irish FVCs declined in the year to 2016Q3, to €390 billion from €415 billion in 2015Q3, coinciding with thin

[99] See FSB Global Shadow Monitoring Report (2015) and IMF Global Financial Stability Report (April, 2015).
[100] Over 98 per cent of investment funds are open-ended in that investors can redeem shares/units in the fund.
[101] Excluding the impact of two funds re-domiciling from Ireland to Luxembourg.
[102] Liquidity spirals comprise both margin and loss spirals. Under illiquid market conditions, margins and loses increase, further affecting the sensitivity of illiquidity. See: Brunnermeier and Pedersen (2009), *"Market liquidity and funding liquidity"*, Review of Financial Studies, Volume 22, Issue 6, pp. 2201-2238.

volumes of securitisation activity globally (Chart 81). This decline was due to a relatively small number of large transactions, including a significant redemption by one entity. The number of FVCs increased in the year to 2016Q3, driven mainly by vehicles not linked to banks, particularly vehicles issuing corporate asset-backed securities.

The potential risks to financial stability from the FVC sector stem mainly from linkages to the banking sector and depend on the model of securitisation. Banks, for example, could potentially make use of securitisation to reduce their capital requirements. On the other hand, bank securitisations can be retained by the bank simply to serve as collateral to access central bank liquidity facilities. Both bank and non-bank financial intermediaries mainly use securitisation for funding purposes, facilitating off-balance sheet risk transfer and, sometimes, lower funding costs. However, as occurred during the financial crisis, securitisations can move back onto the balance sheets of banks as debt matures, contributing to excessive bank leverage. Within FVCs, maturity or liquidity mismatches can occur, particularly where illiquid assets are funded by short-term liabilities. Vehicles sponsored by Irish banks account for 10 per cent of the total assets of FVCs in 2016Q3.[103]

Other non-bank financial intermediaries

Non-securitisation SPVs comprise a wide range of entity types, covering 14 different types of activity, with intra-group financing, external financing and fund-linked investments accounting for 69 per cent of total assets. SPVs are often part of complex financial structures linked to a range of sponsoring entities. Vehicles linked to banks or engaging in loan origination are the main sources of risk to financial stability. The variety of activities of SPVs, together with their innovative business models and their international linkages, add to the complexity of the Irish non-bank financial sector.[104]

The residual sector, which mostly consists of treasury operations of multinationals alongside holding or financial leasing companies, accounts for 13 per cent of the non-bank financial system.

The Irish non-bank financial sector is a significant global centre for non-bank financial intermediation, with complex links to international financial markets. The exposure of the domestic economy is limited and risks are concentrated in the international financial system. In this regard, the Central Bank is actively engaged in international policy fora and is continuously improving data coverage in line with financial stability and regulatory policy responsibilities.

[103] This ratio has been quite stable over recent years.
[104] See: Barrett, Godfrey and Golden (2016), *"New Data Collection on Special Purpose Vehicles in Ireland: Initial Findings and Measuring Shadow Banking"*, Central Bank of Ireland Quarterly Bulletin, Q4, pp. 71-84.

Box 7: Shadow Banking in Ireland, as measured by the Financial Stability Board

The FSB conducts an annual shadow banking monitoring exercise across 28 jurisdictions, covering most of the world's major financial centres. Ireland participated for the second time this year, submitting end-2015 data. The FSB's narrow measure of shadow banking in Ireland amounted to €2.51 trillion at end-2015, an 11.5 per cent increase on end-2014. This increase is due to factors that include underlying growth, revisions to flow of funds data, new reporting for SPVs, and adjustments to the FSB measure of shadow banking. The FSB measure of shadow banking is designed to be conservative and consistent across participating jurisdictions, noting the varying availability of financial data. In turn, more consistency in the measurement of shadow banking assists in risk assessment.

The FSB defines shadow banking in broad terms as credit intermediation by entities and activities outside of the regular banking system, involving significant maturity/liquidity transformation, leverage or credit risk transfer.[1] The narrow measure of shadow banking seeks to categorise shadow banking across five economic functions (EFs): EF1 - mutual funds susceptible to runs; EF2 - lending dependent on short-term funding; EF3 - intermediation dependent on short-term funding or secured funding of client assets; EF4 - facilitating credit creation; EF5 - securitisation. Total assets of the entity are included in the shadow banking measure if it is considered to engage in activities within the five EFs.[2] There is also a residual shadow banking (RSB) category where entities are included if there is insufficient evidence to prove these entities should be excluded or the entities do not fall under any of the EFs. The FSB's narrow measure may be subject to change each year following discussions among the participating jurisdictions and the FSB. Ireland's shadow banking sector consists of investment funds holding credit-related assets and all MMFs in EF1, broker dealers in EF3, credit insurers and holders of credit derivatives in EF4, securitisation SPVs (excluding retained securitisation[3]) in EF5, and a RSB category containing non-securitisation SPVs and a residual "other" figure[4] for which there are a lack of sufficiently granular data.[5] After EF1, the largest categories are EF5 and the RSB category. Within EF1, investment and money market funds are subject to regulatory oversight and mostly employ conservative investment strategies. For funds and SPVs as a whole, almost 90 per cent of assets and liabilities are located outside of Ireland, with Irish links mainly comprising securitisation by Irish banks and cross holdings within the industry.

Table 1 provides a summary of the impact of the various factors contributing to the increase in Ireland's shadow banking sector between end-2014 and end-2015. In EF1, an adjustment to the FSB measure meant any investment fund holding less than 20 per cent of credit-related assets was excluded, providing for a €104 billion modification to the end-2014 figure. This was offset by growth in money market and investment fund assets of €184 billion during 2015. In EF4, adjustments to the FSB measure saw the inclusion of credit insurance firms and holders of credit derivatives. The latter comprise investment funds and securitisation vehicles already included in the Irish submission for EF1 and EF5, respectively, and thus these entities are not counted in EF4. In EF5, underlying growth between 2014 and 2015 coupled with a revised figure for retained securitisation led to a €56 billion increase in securitisation SPV assets. In the RSB category, the introduction of new reporting requirements for non-securitisation SPVs from 2015Q3 allowed for a better identification of these entities, leading to the removal of €172 billion of assets from shadow banking at end-2015.[6] This was offset by growth in the "other" sector of the financial accounts totalling €155 billion, which when coupled with the removal of operational leasing vehicles of €21 billion, meant the RSB category rose by €4 billion in 2015. There was also a data revision to the 2014 "other" sector in the flow of funds data driven by previous underestimation of the new SPV reporting population.

Table 1: Components of Ireland's FSB shadow banking measure (total assets, € billion)

Economic Function	**End-2014 as per 2015 FSB Guidelines** **(a)**	Flow of funds revisions and adjustments to end-2014 due to 2016 FSB Guidelines (b)	**End-2014 as per 2016 FSB Guidelines** **(a)+(b) = (c)**	Growth and SPV exclusion from end-2014 to end-2015 (d)	**End-2015** **(c) + (d) = (e)**
EF1	1387.3	-104.0	1283.3	183.8	1467.1
EF2	-	-	-	-	-
EF3	4.1	-	4.1	3.0	7.1
EF4*	-	0.7 (56.2)	0.7 (56.2)	-0.3 (1.1)	0.4 (57.3)
EF5	360.9	23.6	384.6	32.0	416.6
RSB	497.8	120.7	618.5	4.3	622.8
Total (adjusted)*	**2.250.1**	**41.0**	**2.291.1**	**222.8**	**2514.0**

Source: Central Bank of Ireland
*Totals exclude the amounts in brackets in EF4, which represent investment funds and securitisation vehicles assets already included in EF1.

1. See: Financial Stability Board (2015), *Global Shadow Banking Monitoring Report 2015*, 12 November 2015.
2. The assets of entities consolidated into other financial corporations are included in the narrow measure, except where prudentially consolidated into banking groups.
3. Retained securitisation vehicles take loans from a bank, turn them into debt securities, transfer these back to the same bank, generally for use as collateral for central bank funding.
4. Some high level data indicate this residual figure contains finance leasing companies, holding companies and treasury operations of multinational companies.
5. NAMA accounts for €55.4 billion of securitisation vehicle assets in EF5 and €9.8 billion of non-securitisation SPV assets in RSB. NAMA meets the ECB FVC definition and therefore is included on a non-consolidated basis. In line with FVC reporting requirements, the value of loan assets transferred from the loan originator to an FVC must be reported at the originator's book value. Therefore, the asset value appears larger than would be the case if the market value of securitised loans on NAMA's balance sheet was reported.
6. See: Barrett, D., Godfrey, B., and Golden B. (2016), *New Data Collection on Special Purpose Vehicles in Ireland: Initial Findings and Measuring Shadow Banking*, Central Bank of Ireland Quarterly Bulletin, Q4 (2016).

Abbreviations

Country abbreviations follow the European Union standards.

AIB	Allied Irish Bank
AMECO	Annual Macro-Economic Database
APE	Annual premium equivalent
BIS	Bank of International Settlements
BOI	Bank of Ireland
BER	Buildings Energy Rating
BPFI	Banking and Payments Federation Ireland
BRRD	Banking Recovery and Resolution Directive
BTL	But-to-let
CBRE	Coldwell Banker Richard Ellis Group
CCyB	Countercyclical capital buffer
CDS	Credit default swaps
CMU	Credit Markets Union
CoCo	Contingent Convertible
COREP	Common Reporting Framework
CPI	Consumer price index
CRD	Capital Requirements Directive
CRE	Commercial real estate
CSO	Central Statistics Office
CSPP	Corporate Sector Purchase Programme
DPD	Days-past-due
EA	Euro Area
EEA	European Economic Area
EAPP	Expanded Asset Purchase Programme
EBA	European Banking Authority
EBS	Educational Building Society
EC	European Commission
ECB	European Central Bank
EEA	European Economic Area
EF	Economic Function
ELG	Eligible Liabilities Guarantee
EMEs	Emerging Market Economies
ESCB	European System of Central Banks
ESRB	European Systemic Risk Board
ESRI	Economic and Social Research Institute
EU	European Union
FDI	Foreign Direct Investment
FINREP	Financial reporting
FOE	Freedom of establishment
FOMC	Federal Open Market Committee
FOS	Freedom of service
FSAP	Financial sector assessment programme
FSB	Financial Stability Board
FTB	First-Time Buyer
FVC	Financial vehicle corporations
GDP	Gross Domestic Product
G-SII	Globally Systemically Important Institution
IF	Investment fund
IMF	International Monetary Fund
IPD	Investment Property Databank
IPO	Initial Public Offering
JLL	Jones Lang LaSalle
KBC	Kredietbank ABB Insurance CERA Bank
LCR	Liquidity coverage ratio
LO	Loss of Ownership
LTI	Loan to income ratio
LTV	Loan to value ratio
MABS	Money advice and budgeting service
MFR	Macro-Financial Review
MFI	Monetary financial institution
MGA	Managing general agents
MMF	Money market fund
MNC	Multinational Corporation
MSCI	Morgan Stanley Capital International
NAMA	National Asset Management Agency
NFC	Non-financial corporation
NIIP	Net international investment position
NPL	Non-performing loan
NTMA	National Treasury Management Agency
O-SII	Other Systemically Important Institutions
PDH	Primary dwelling house
PIA	Personal insolvency arrangement
PMI	Purchasing managers' index
PTSB	Permanent PTSB
REIT	Real Estate Investment Fund
RPPI	Residential Property Price Index
RSB	Residual shadow banking
RWA	Risk weighted asset
SBCI	Strategic Banking Corporation of Ireland
SCSI	Society of chartered surveyors of Ireland
SFS	Standard financial statement
SGP	Stability and Growth Pact
SME	Small and Medium Enterprise
SNL	Savings and Loan Financial
SPV	Special Purpose Vehicle
SSB	Second and Subsequent Buyer
SSM	Single supervisory mechanism

SVR	Standard variable rate
UCITS	Undertakings for Collective Investment in Transferable Securities
USD	United States Dollar
VA	Variable annuity
VAT	Value added tax
VIX	Chicago Board Options Exchange Volatility Index
WEO	World Economic Outlook

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