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Notes

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2. Unless otherwise stated, statistics refer to the State, i.e., Ireland exclusive of Northern Ireland.
3. In some cases, owing to the rounding of figures, components do not add to the totals shown.
4. The method of seasonal adjustment used in the Bank is that of the US Bureau of the Census X-11 variant.
5. Annual rates of change are annual extrapolations of specific period-to-period percentage changes.
6. The following symbols are used:

e	estimated
n.a.	not available
p	provisional
..	no figure to be expected
r	revised
-	nil or negligible
q	quarter
f	forecast
7. Data on euro exchange rates are available on our website at www.centralbank.ie and by telephone at 353 1 2246380.

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Comment

The Covid-19 pandemic continues to have profound societal and economic impacts, both at the global and national level. Reflecting the recent resurgence in cases, both domestically and globally, the near-term outlook has deteriorated and become more uncertain. However, the development and prospect of widespread deployment of vaccines offers hope for a path out of the crisis and, further out, an improved outlook for economies and societies.

Looking ahead, the outlook for the Irish economy is dependent on a range of factors in relation to Covid-19. These include, the frequency, scale and duration of new Covid-19 outbreaks; the nature and duration of the containment measures to combat these outbreaks; the degree to which policy supports mitigate the resulting adverse economic impacts; the time it takes for effective vaccines to be widely deployed; and, the degree to which the economic disruption that has occurred leaves long-lasting scars. In addition to these Covid-19 related factors, the potential impact of the new EU-UK Trade and Cooperation Agreement also has to be taken into account.

Since the start of the pandemic, the scale of the impact on the Irish economy has fluctuated in line with the path of the virus and the severity of the containment measures. Ireland had the sharpest decline in consumption and underlying domestic demand and the strongest rise in savings in the EU in the second quarter of 2020. However, industrial output held up better than in other EU countries, due to the strong performance of some key MNE-dominated exporting sectors. As a result, Ireland experienced the smallest fall in GDP in the EU in the second quarter. Over the summer, as the intensity of the virus receded and containment measures were eased, domestic economic activity rebounded strongly in the third quarter.

However, as the severity of the virus increased again in the fourth quarter, and Level 5 restrictions came into effect from late October to early December, there was a renewed slowdown in domestic economic activity, though, to a much lesser extent, than in the Spring. This, primarily, reflected the fact that more sectors remained open than in the Spring and also the effects of adaptation by both individuals and businesses to living with

Covid-19. Similarly, reflecting the fact that the construction and non-essential retail sectors remained open, the impact on the labour market was also less severe, as evidenced by a smaller rise and lower peak in pandemic unemployment payment (PUP) claimants in the fourth quarter. Notwithstanding this, in December, the Covid-adjusted unemployment rate stood at slightly over 20 per cent.

The evidence from the period since the outbreak of the pandemic indicates that the hardest hit sectors, and the ones which have been slowest to recover, have been those which are more contact-intensive, or involve crowds or travel. In many of these sectors, activity has remained weak, even during periods of re-opening, in contrast to sectors such as wholesale and retail, which have tended to experience strong rebounds on re-opening. This suggests the potential for more persistent effects from the pandemic in some sectors.

In addition to hesitancy by consumers to re-engage in some activities, the very sharp rise in the savings rate, which has occurred since the Spring, points to broader precautionary behaviour on the part of households. While the damage to household incomes from the pandemic has been mitigated by the provision of large-scale income supports, household deposits have soared, pointing to higher precautionary saving, in addition to the impact of reduced opportunities to spend. How these savings are used will be important in shaping the recovery from the current downturn.

Taking account of the renewed weakness in the fourth quarter, the out-turn for modified domestic demand for 2020 is now projected to show a fall of 7.1 per cent, with consumer spending projected to have fallen by 8.3 per cent last year. On the external side, despite the downturn in global trade, Irish exports are projected to have grown by over 4 per cent last year, with this resilience reflecting the strong growth of exports of pharmaceuticals, computer services and business services. As a result, GDP is now estimated to have grown by 2.5 per cent in 2020.

The path ahead for the economy will continue to depend on the future path of the virus and, in the near-term, on the measures to contain its renewed spread. Beyond that, it is assumed, that economic activity will benefit from the accumulating positive impact of successful and widening deployment of vaccines.

The recent resurgence in cases and re-imposition of strict containment measures weakens the near-term outlook and makes it more uncertain. The broader sectoral closures in place have pushed the numbers on income supports above the levels seen in the fourth quarter of 2020, but not as high as those reached last Spring. The containment measures are likely to dampen activity significantly in the first quarter and, beyond that, some

public health measures are likely to continue to be required, until the successful deployment of effective vaccines reaches a significant proportion of the population. Assuming successful deployment of vaccines by the second half of the year, domestic economic activity should begin to rebound strongly. On this basis, modified domestic demand is forecast to grow by 2.9 per cent in 2021, while GDP is projected to grow by 3.8 per cent, although the recovery in the labour market is likely to lag somewhat until the broader economic recovery becomes more well established. The outlook is considerably uncertain, however, and contingent on key assumptions on Covid-19 developments.

Looking ahead, a further pick-up is projected in 2022, with modified domestic demand forecast to grow by 3.6 per cent and GDP projected to grow by 4.6 per cent. While uncertainty and a subdued labour market are likely to keep precautionary savings elevated in 2021, these restraints should ease next year. The unwinding of the large stock of savings accumulated during the pandemic should support a strong recovery in consumption in 2022. Similarly, the reduction in uncertainty should allow investment to begin to recover next year. However, recovery may not be even across all sectors, as the crisis may have a lasting impact on some activities, for example, through shifts in the delivery of services or changing consumer preferences

A more severe Covid-19 scenario, assuming only limited success in containing the virus from renewed health restrictions and a substantially longer timeline for the deployment of vaccines is examined in Box B, page 28. In this scenario, after its sharp fall in 2020, modified domestic demand would be projected to barely grow this year and by only 1.4 per cent in 2022.

The new EU-UK Trade and Cooperation Agreement (TCA) has averted the threat of a no-deal WTO Brexit and means that the significant disruption to economic activity that would have accompanied such an outcome has been avoided. The forecasts published in the previous Bulletin, in October, assumed that trade with the UK would take place on WTO terms from 1 January 2021. The new agreement allows for the continuation of a basic economic relationship between the EU and UK and there are likely to be some opportunities for the Irish economy in the long run as the agreement becomes established, such as the potential for increased foreign direct investment or through export diversification. Nevertheless, the EU-UK TCA makes trade in both goods and services more cumbersome and costly relative to EU membership. In the short run, this is likely to be associated with continued supply-chain disruption. In the long run, the negative impact of the UK's EU exit on trade flows, migration and productivity will reduce output in the Irish economy.

Turning to the policy response, the unprecedented challenges posed by Covid-19 have been met by exceptional policy support aimed at safeguarding economic activity. The impact of the pandemic has been mitigated by a range of fiscal, monetary, macro-prudential and micro-prudential policy actions to support vulnerable households and businesses and to minimise the potential that regulatory capital requirements act as a constraint on the provision of lending.

With a strong resurgence of the virus, both domestically and internationally, the near-term outlook is unfavourable and uncertainty remains high, arguing for the need for policy to continue to provide support to stabilise the economy and foster recovery. However, the size and nature of support should be ready to adapt to changing circumstances. Policy support should continue to counter the threat to viable economic activities and employment from the pandemic and, in time, facilitate structural transformations which support economically sustainable activities. This would help to enhance resilience, support the productive capacity of the economy and mitigate scarring effects, such as long-term unemployment.

On the fiscal side, the rise in deficit and debt ratios that has occurred has been both warranted and necessary. While temporary and targeted fiscal policy support will need to be maintained in the short-term, any permanent increases in expenditure would need to be funded in a sustainable manner. Ultimately, more favourable growth dynamics in coming years should support a decline in the public debt ratio. However, even if action does not need to be taken now, it is important to plan to reduce the level of the debt ratio in time, to ensure that the economy is not vulnerable to future shocks.

An Timpeallacht Gheilleagrach

Tá impleachtaí móra sóisialta agus eacnamaíocha Covid-19 le brath i gcónaí ar leibhéal domhanda agus náisiúnta. I bhfianaise an bhorrtha nua ar chásanna, anseo in Éirinn agus ar fud an domhain, tá an t-ionchas gearrthéarmach tar éis dul in olcas agus tá éiginnteacht níos mó ag baint leis an ionchas sin. Ar a shon sin, is údar misnigh é go bhfuil vacsaíní á bhforbairt agus á leithdháileadh go forleathan toisc go dtugann sé léas dóchais dúinn go mbeidh réiteach ar an ngéarchéim agus go mbeidh ionchas feabhsaithe ann do gheilleagair agus do shochaithe amach anseo.

Ag féachaint romhainn, tá an t-ionchas do gheilleagar na hÉireann ag brath ar raon tosc a bhaineann le Covid-19. Orthu sin, áirítear minicíocht, scála agus fad ráigeanna nua Covid-19; cineál agus fad na mbeart imshrianta chun dul i ngleic leis na ráigeanna sin; a mhéid a thacóidh tacaíochtaí beartais le maolú a dhéanamh ar na hiarmhairtí díobhálacha eacnamaíocha a éireoidh as na bearta imshrianta sin; an méid ama a thógfaidh sé vacsaíní éifeachtacha a leithdháileadh go forleathan; agus, a mhéid a fhágfaidh an suaitheadh eacnamaíoch a lorg. De bhreis ar na tosc sin a bhaineann le Covid-19, ní mór iarmhairt fhéideartha Chomhaontú Trádála agus Comhair AE-RA a chur san áireamh.

Ó thús na paindéime, bhí scála na hiarmharta ar gheilleagar na hÉireann ag athrú i gcomhréir le conair an víris agus le déine na mbeart imshrianta. Is in Éirinn a chonacthas an laghdú ba ghéire ar thomhaltas agus ar bhunéileamh intíre, agus an méadú ba láidre ar choigilteas san AE sa dara ráithe de 2020. Ar a shon sin, d'éirigh ní b'fhearr le haschur tionsclaíoch in Éirinn ná i dtíortha AE eile mar gheall ar fheidhmíocht láidir roinnt earnálacha onnmhairíochta tábhachtacha áirithe ina mbíonn grúpaí ilnáisiúnta fiontar i réim. Dá thairbhe sin, bhí an titim ar OTI in Éirinn ar an gceann ba lú san AE sa dara ráithe. I rith an tsamhraidh, chonacthas athbhorradh faoin ngníomhaíocht eacnamaíoch intíre sa tríú ráithe de réir mar a laghdaigh géire an víris agus de réir mar a maolaíodh na bearta imshrianta.

Tháinig moilliú athuair, áfach, ar an ngníomhaíocht eacnamaíoch intíre de réir mar a mhéadaigh géire an víris arís sa cheathrú ráithe agus de réir mar a tháinig srianta i bhfeidhm ó dheireadh mhí Dheireadh Fómhair go dtí tús mhí na Nollag; ach ní nach raibh an moilliú sin chomh hollc leis an moilliú a

tharla san Earrach. Bhí sé seo amhlaidh, go príomha, toisc go raibh níos mó eárnálacha ar oscailt an babhta seo ná mar a bhí san Earrach agus toisc go raibh daoine aonair agus gnóthaí ag dul in oiriúint do bheith ag maireachtáil le Covid-19. Ar an gcaoi chéanna, ní raibh an iarmhairt ar an margadh saothair chomh dian céanna, rud a léirítear i méadú ní ba lú agus i mbuaicphointe ní b'ísle ar líon na n-éilitheoirí ar an Íocaíocht Dífhostaíochta Phaindéime (PUP) sa cheathrú ráithe, toisc gur fhan na heárnálacha foirgníochta agus neamhriachtanacha miondíola ar oscailt. Dá ainneoin sin, bhí an ráta dífhostaíochta arna choigeartú do Covid os cionn 20 faoin gcéad.

Tugann an fhianaise ón tréimhse ó bhí tús na paindéime ann gurb iad na heárnálacha sin a mbíonn dianteagmháil, nó sluaite nó taisteal i gceist leo, na heárnálacha is mó a ndearnadh díobháil dóibh. Tá gníomhaíocht lag i gcónaí i gcuid mhór de na heárnálacha seo, fiú le linn tréimhsí athoscailte, i gcodarsnacht le heárnálacha eile ar nós eárnálacha mórdhíola agus miondíola, ar tháinig athbhorradh láidir orthu nuair a d'athoscail siad. Tugann sé sin le tuiscint go bhfuil an fhéidearthacht ann go mbeidh éifeachtaí níos leanúnaí ag an bpaindéim ar eárnálacha áirithe.

Ó tharla go bhfuil drogall ar thomhaltóirí tabhairt faoi ghníomhaíochtaí áirithe arís, agus go bhfuil méadú géar ar an ráta coigiltis atá feicthe ón Earrach, tugtar le tuiscint go bhfuil iompar réamhchúramach na dteaghlach sách leathan. Cé gur maolaíodh an dochar d'ioncam na dteaghlach trí bhíthin tacaíochtaí mórsála ioncaim, tá méadú mór tagtha ar thaiscí na dteaghlach, rud a thugann le tuiscint go bhfuil coigilteas réamhchúramach níos airde i gceist agus níos lú deiseanna chun airgead a chaitheamh. Beidh úsáid an choigiltis sin tábhachtach i dtéarmaí an téarnamh ón gcor chun donais reatha a mhúnlú.

Agus an laige athuair sa cheathrú ráithe á cur san áireamh, meastar go mbeidh titim 7.1 faoin gcéad ar tháirgeacht an éilimh mhodhnaithe intíre don bhliain 2020, agus meastar gur laghdaigh caiteachas tomhaltóirí faoi 8.3 faoin gcéad anuraidh. Ar an taobh seachtrach, meastar gur tháinig fás os cionn 4 faoin gcéad ar onnmhairí Éireannacha anuraidh, d'ainneoin an chor chun donais ar thrádáil dhomhanda, agus léiríonn an athléimneacht seo an fás láidir ar onnmhairí cógaisíochta, seirbhísí ríomhaireachta agus seirbhísí gnó. Dá bhrí sin, meastar anois gur tháinig fás 2.5 faoin gcéad ar OTI in 2020.

Beidh conair an gheilleagair ag brath ar chonair an víris agus, sa ghearrthéarma, ar na bearta a úsáidfear chun leathadh an víris a shrianadh. Níos faide anonn, glactar leis go dtairbheoidh an ghníomhaíocht eacnamaíoch d'iarmhairt dhearfach leithdháileadh leathan rathúil na vacsaíní.

Leis an mborradh ar chásanna le déanaí agus le feidhmiú dianbheart imshrianta arís, lagaítear an t-ionchas gearrthéarmach agus méadaítear an éiginnteacht a bhaineann leis. Leis an dúnadh leathan earnála atá i bhfeidhm, tá méadú tagtha ar líon na ndaoine a bhfuil tacaíochtaí ioncaim á bhfáil acu sa chaoi go bhfuil an líon sin níos airde anois ná na leibhéil a chonacthas sa cheathrú ráithe de 2020 ach níl sé chomh hard leis na leibhéil a chonacthas san Earrach anuraidh. Leis na bearta imshrianta, is dócha go mbeidh maolú mór ar ghníomhaíocht sa chéad ráithe, agus is dócha, níos faide anonn, go mbeidh bearta sláinte poiblí fós de dhíth go dtí go mbeidh vacsaíní éifeachtacha leithdháilte go rathúil ar chion suntasach den daonra. Ag glacadh leis go mbeidh leithdháileadh rathúil vacasíní curtha i gcrích faoin dara leath den bhliain, ba cheart go mbeadh athbhorradh láidir ar an ngníomhaíocht eacnamaíoch intíre. Ar an mbonn sin, tuartar go mbeidh fás 2.9 faoin gcéad ar an éileamh modhnaithe intíre in 2021, fad a mheastar go mbeidh fás 3.8 faoin gcéad ar OTI, ach is dócha go mbeidh an téarnamh ar an margadh saothair ar gcúl go dtí go mbeidh an téarnamh eacnamaíoch leathan bunaithe agus seanbhunaithe. Tá éiginnteacht shuntasach ag baint leis an ionchas, áfach, agus beidh an t-ionchas ag brath ar thiomhdí tábhachtacha áirithe maidir le forbairtí Covid-19.

Ag féachaint romhainn, meastar go mbeidh tuilleadh feabhais ar chúrsaí in 2022 agus tuartar go mbeidh fás 3.6 faoin gcéad ar an éileamh modhnaithe intíre, mar aon le fás 4.6 faoin gcéad ar OTI. Cé gur dócha go mbeidh coigilteas réamhchúramach ard ann go fóill in 2021 mar gheall ar an éiginnteacht agus an margadh maolaithe saothair, ba cheart go dtiocfadh maolú ar na srianta sin an bhliain seo chugainn. Le scaoileadh stoc mór an choigiltis a carnadh le linn na paidéime, ba cheart go dtacófaí le téarnamh láidir ar thomhaltas in 2022. Ar an gcaoi chéanna, ba cheart go bhfeicfí téarnamh tosaigh ar infheistíocht an bhliain seo chugainn nuair a laghdóidh an éiginnteacht. Tá seans ann, áfach, nach mbeidh téarnamh cothrom le feiceáil ar fud na n-earnálacha uile ó tharla go bhféadfaidh go mbeidh iarmhairt fhadtéarmach ag an ngéarchéim ar ghníomhaíochtaí áirithe, mar shampla, trí bhíthin athruithe ar sheachadadh seirbhísí nó athruithe ar shainroghanna tomhaltóirí.

I mBosca B, leathanach 28, breathnaítear ar chás níos déine Covid-19 ina nglactar leis nach n-éireoidh ach go páirteach le srianta athnuaite sláinte agus go mbeidh amlíne i bhfad níos faide i gceist chun vacsaíní a leithdháileadh. Sa chás seo, meastar gurb ar éigean a thiocfaidh fás ar an éileamh modhnaithe intíre i mbliana, i ndiaidh na titime móire a tháinig air in 2020, agus nach dtiocfaidh ach méadú 1.4 faoin gcéad air in 2022.

Leis an gComhaontú Trádála agus Comhair idir an tAontas Eorpach agus an Ríocht Aontaithe (TCA), seachnaíodh an baol go mbeadh Brexit gan chomhaontú ar théarmaí WTO ann agus ciallaíonn sé gur seachnaíodh an

suaitheadh suntasach a chruthódh toradh den sórt sin. Sna réamhaisnéisí a foilsíodh san Fhaisnéis Ráithiúil roimhe seo i mí Dheireadh Fómhair, glacadh leis go mbeadh an Ríocht Aontaithe agus an tAontas Eorpach ag trádáil ar théarmaí WTO ón 1 Eanáir 2021 ar aghaidh. Leis an gcomhaontú nua seo, leantar le caidreamh eacnamaíoch bunúsach idir AE agus RA agus is dócha go mbeidh roinnt deiseanna ann do gheilleagar na hÉireann san fhadtéarma de réir mar a dhéanfar an comhaontú a bhunú, amhail méadú féideartha ar infheistíocht dhíreach choigríche nó trí bhíthin éagsúlú onnmhairí. Mar sin féin, tá trádáil earraí agus seirbhísí níos anásta agus níos costasaí le TCA AE-RA ná mar atá le ballraíocht AE. Sa ghearrthéarma, is dócha go mbeidh baint aige seo le suaitheadh leanúnach ar an slabhra soláthair. San fhadtéarma, beidh laghdú ar aschur gheilleagar na hÉireann de thoradh thionchar diúltach imeacht na Ríochta Aontaithe as an Aontas Eorpach ar shreafaí trádála, imirce agus tháirgeacht.

Ag breathnú ar an bhfreagairt beartais, táthar ag dul i ngleic leis na dúshláin gan fasach a éiríonn as Covid-19 trí bhíthin mórtacaíocht beartais a fhéachann le gníomhaíocht eacnamaíoch a chosaint. Tá iarmhairt na paindéime maolaithe ag raon gníomhaíochtaí beartais fhioscaigh, airgeadaíochta, macrastuamachta agus micreastuamachta chun tacú le teaghlach agus le gnóthaí leochaileacha agus chun go n-íoslaghdófar an fhéidearthacht go ngníomhóidh ceanglais caipitil rialála mar shrian ar sholáthar iasachtaí.

Le borradh láidir ar an víreas arís, anseo in Éirinn agus go hidirnáisiúnta, tá an t-ionchas gearrthéarmach neamhfhabhrach agus tá éiginnteacht mhór ann i gcónaí, rud a chuireann leis an argóint gur gá go leanfar le tacaíocht a chur ar fáil trí bhíthin beartais chun an geilleagar a chobhsú agus téarnamh a chothú. Ba cheart go mbeifí réidh, áfach, chun cineál agus méid na tacaíochta sin a chur in oiriúint do dhálaí a bheidh ag athrú. Le tacaíocht beartais, ba cheart go gcuirfí in aghaidh na bagartha ón bpaindéim do ghníomhaíochtaí inmharthana eacnamaíocha agus don fhostaíocht agus, le himeacht aimsire, go n-éascófaí claochluithe struchtúracha a thacóidh le gníomhaíochtaí inmharthana eacnamaíocha. Chuideodh sé seo le hathléimneacht a fheabhsú, le tacú le cumas táirgthe an gheilleagair, agus le héifeachtaí díobhálacha, ar nós dífhostaíocht fhadtéarmach, a mhaolú.

Ar an taobh fioscach, bhí an méadú ar chóimheasa easnaimh agus fiachais inchosanta. Cé gur gá leanúint le tacaíocht shealadach agus spriocdhírthe beartais fhioscaigh sa ghearrthéarma, is gá go ndéanfar aon mhéaduithe buana ar chaiteachas a mhaoiniú ar mhodh inbhuanaithe. Ar deireadh thiar, ba cheart go dtacódh dinimic fhabhrach fáis sna blianta atá romhainn le laghdú ar an gcóimheas fiachais phoiblí. Fiú mura gá dul i mbun gnímh anois, tá sé tábhachtach go ndéanfar pleanáil chun leibhéal an chóimheasa

fiachais a laghdú go tráthúil d'fhonn a chinntiú nach mbeidh an geilleagar leochaileach do thurraingí amach anseo.

The Irish Economy

Overview

The Covid-19 pandemic, which caused an unprecedented contraction in the domestic economy in 2020, will remain the key determinant of the performance of the economy this year. Notwithstanding the recent intensification of public health restrictions, the prospect of an extensive Covid-19 vaccine rollout points to an improved outlook for the domestic economy in the second half of the year. In addition, while the EU-UK Trade and Cooperation Agreement (TCA) will introduce new trade frictions that will impede growth in the Irish economy, the outlook for exports has improved compared to the prospects under a no-deal Brexit (See Box C). Reflecting this, together with a more positive outlook for domestic demand, projected modified domestic demand growth has been revised upwards to 2.9 per cent for this year with growth expected to increase to 3.6 per cent in 2022. GDP is forecast to grow by 3.8 per cent this year and by 4.6 per cent next year.

The estimated 2020 outturn has also been revised upwards reflecting a strong rebound in domestic demand in the third quarter and resilient exports. High frequency indicators suggest that the stringency of restrictions has been an important driver of economic activity, particularly consumer spending. Estimated consumer spending has been revised downwards in this Bulletin to account for developments in the fourth quarter but this has been more than offset by an upward revision to exports. Overall, we estimate that modified domestic demand declined by 7.1 per cent in 2020. Reflecting the strength of exports in particular, our estimate for GDP growth in 2020 has been revised from -0.4 per cent in the last Bulletin to 2.5 per cent for 2020.

The baseline outlook for domestic demand this year is contingent on developments in the Covid-19 pandemic and in particular, the rollout of an effective vaccination program. A relatively subdued first half of 2021 is expected with demand being curtailed by ongoing public health restrictions. Evidence from consumer behaviour in 2020 points to a potential surge in demand in the second half of the year, as the vaccination program begins to allow for a more sustained loosening of the public health restrictions. Supported by strong government income-support measures, modified domestic demand is projected to increase by 2.9 per cent this year. A further rise in modified domestic demand of 3.6 per cent growth is forecast for 2022. This reflects an expected strong momentum in consumer spending and investment more than offsetting a likely negative

contribution from government expenditure as time-limited Covid-19 related expenditure programmes are concluded.

Strong export growth from the pharmaceutical, medical devices and IT sectors were the main factors behind positive growth in GDP last year, and will remain resilient this year and in 2022. With the threat of a no-deal Brexit avoided, indigenous exporting firms should benefit from a post-Covid international recovery, notwithstanding increased trade frictions under the new EU-UK TCA. Total goods and services exports are forecast to increase by 3.5 per cent this year accelerating to 5.5 per cent growth next year as the post-Covid international recovery gathers pace.

The recovery in the labour market will be slower to materialise, remaining above its pre-Covid level beyond 2022. A lagged labour market response to the output recovery, as well as a gradual phasing out of the pandemic related income support schemes, would see unemployment increase from 6.2 per cent in 2020 to an average of 9.3 per cent this year before declining to 7.8 per cent in 2022.

The baseline scenario presented in this Bulletin represents our view of the most likely outlook for the economy, contingent on assumptions regarding COVID-19 developments, which are subject to exceptional levels of uncertainty. A key assumption in this regard is the successful and timely deployment of an effective vaccination program this year. An alternative scenario, contained in Box B, assumes only limited success from renewed health restrictions in containing the virus and a substantially longer timeline for the deployment of the vaccine. In this scenario, while growth remains positive in 2021, GDP would expand by only 1.5 per cent over 2020. In 2022, GDP growth in this scenario would pick up to 2.3 per cent.

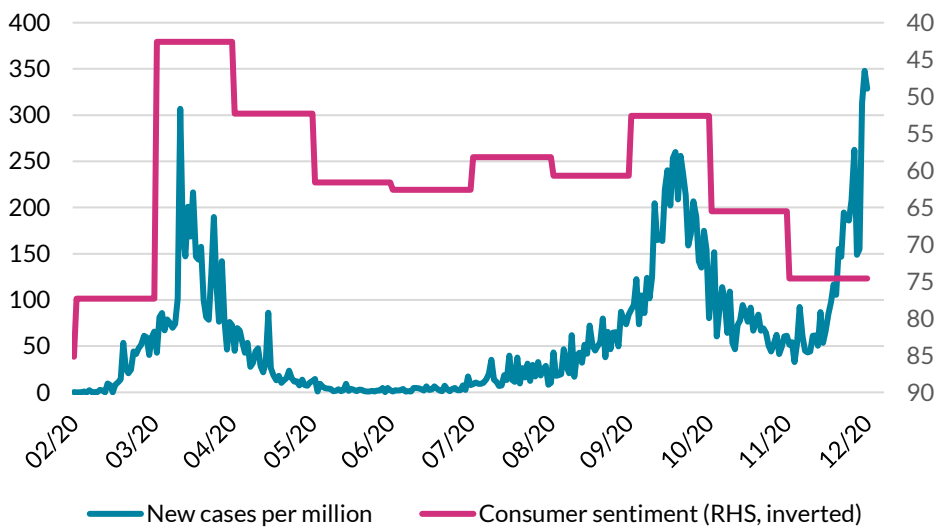
Table 1 – Forecast Summary Table

Real Economic Activity	2019	2020e	2021f	2022f
Personal Consumer Expenditure	3.2	-8.3	2.1	6.9
<i>Public Consumption</i>	6.3	11.8	2.9	-7.3
Gross Fixed Capital Formation	74.8	-35.1	-14.1	10
Exports of Goods and Services	10.6	4.2	3.5	5.5
Imports of Goods and Services	32.4	-12.9	-2.5	6.5
Gross Domestic Product	5.6	2.5	3.8	4.6
Gross National Product	3.4	0.5	7	2.9
Modified Domestic Demand	3.3	-7.1	2.9	3.6
External Trade and Payments				
Balance of Payments Current Account (€m)	-40,406	8,055	10,264	10,398
Current Account (% of GDP)	-11.4	2.2	2.7	2.6
Prices, Costs and Competitiveness				
Harmonised Index of Consumer Prices (HICP)	0.9	-0.5	0.6	0.8
HICP of which: Goods	-0.8	-2	0	0
HICP of which: Services	2.4	0.9	1	1.4
HICP Excluding Energy	0.9	-0.1	0.2	0.7
Consumer Price Index (CPI)	0.9	-0.3	0.9	0.8
Compensation per Employee	3.5	-2.3	1	1.8
Labour Market				
Total Employment (% change)	2.9	-1.7	-4	3.2
Labour Force (% change)	2	-0.4	-0.8	1.6
Unemployment Rate	5	6.2	9.3	7.8

Recent Developments

During the fourth quarter of 2020, COVID-19 case numbers rose substantially in October, prompting a six-week move to Level 5 restrictions. The subsequent relaxation of the restrictions saw a strong recovery in consumption and in activity during December. This rise in activity was then followed by a new, unprecedented surge in infections, as can be seen in Figure 1. The figure also shows how consumer sentiment throughout 2020 has broadly moved in the opposite direction to case numbers, suggesting that consumer behaviour has been influenced by the ebbs and flows in the path of the virus.

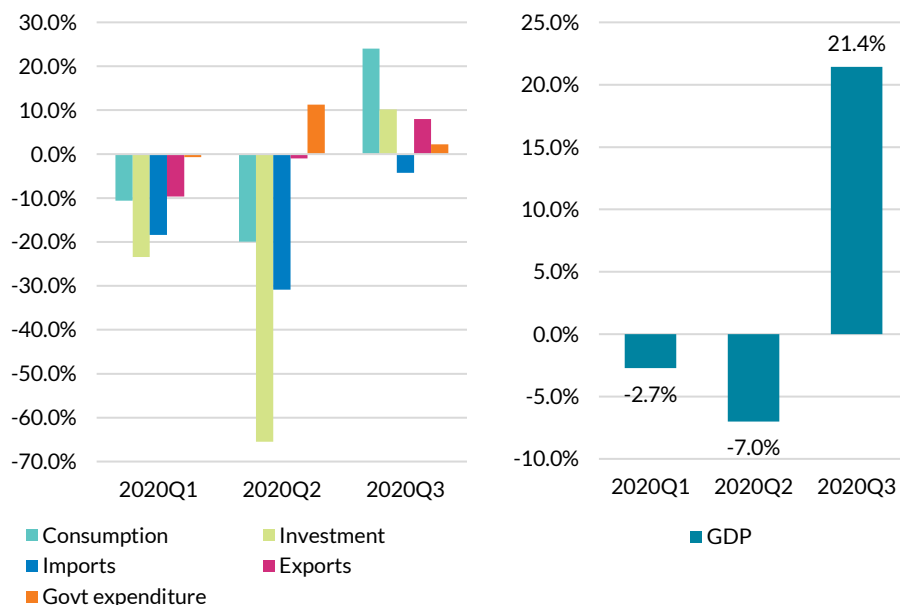
Figure 1: Consumer Sentiment and New COVID-19 Cases



Source: Health Protection Surveillance Centre & KBC Bank Ireland

National Accounts data show that economic activity recovered sharply during the third quarter of 2020 from the shock of the first wave of the pandemic and associated restrictions. Real GDP rebounded strongly, growing by 11.1 per cent quarter-on-quarter, after a decline of 3.5 per cent in Q1 and 3.2 per cent in Q2. Year-on-year, GDP in Q3 2020 was 8.1 per cent higher than in the same period in 2019, while Gross National Product and Modified Total Domestic Demand were 3.7 per cent and 4.2 per cent lower, respectively. Figure 2 shows the developments of some of the main national account aggregates up to Q3 2020.

Figure 2: Quarterly Growth of GDP and its Components

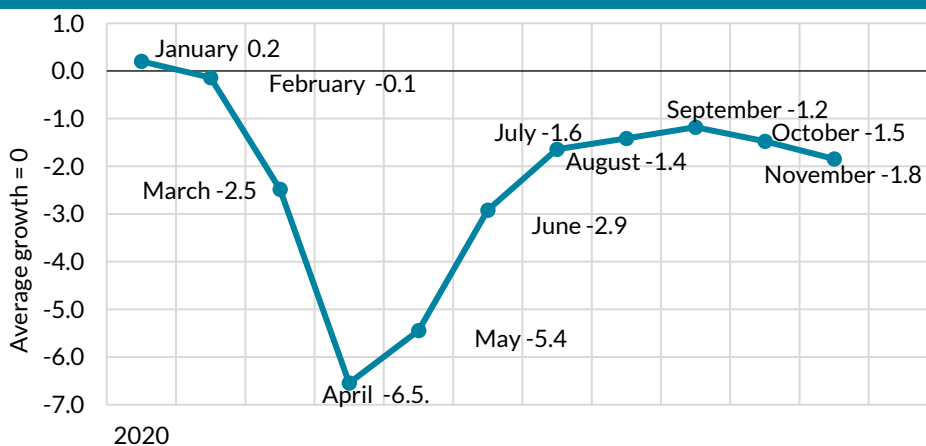


While remaining below pre-pandemic levels, domestic activity recovered strongly during the third quarter. The disparity between the outturn for GDP and Modified Domestic Demand is attributable to the strong performance of net exports, with positive export growth returning and imports declining substantially, resulting in an improvement in the trade balance.

While value-added in most sectors declined as a result of the pandemic and associated restrictions, two sectors were responsible for the steep annual rise in GDP: Information and Communications services (+33.6% year-on-year in Q3) and Manufacturing (+13.5%). This is in line with export performance, as these are primarily export-oriented sectors. In particular, exports and the manufacturing sector were driven once again by exports of Pharmaceutical products, which between January and November 2020 were about 24% higher in value compared to the corresponding period of 2019.

After a strong third quarter of recovery, the move to Level 5 restrictions from late October to early December prompted a renewed weakening in real-time data, which pointed to economic activity slipping back into negative growth territory in the fourth quarter of 2020. However, the observed impact on overall economic activity was less severe than seen during the earlier period of Level 5 restrictions in the spring. The Central Bank's Business Cycle Indicator (BCI), which aggregates the main indicators of economic activity (such as employment, PMIs, consumption) into a single number representing higher or lower than average economic growth, declined in October and November (Figure 3). It had been recovering strongly after falling to record low levels in March and April. The main contributor to the decline in the indicator in November was the labour market and retail sales data.

Figure 3: Business Cycle Indicator

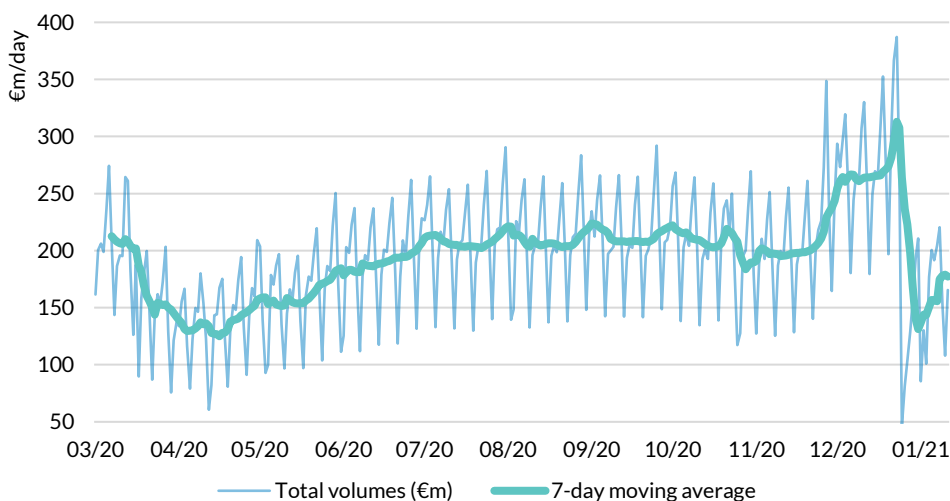


Source: Conefrey and Walsh (2020)

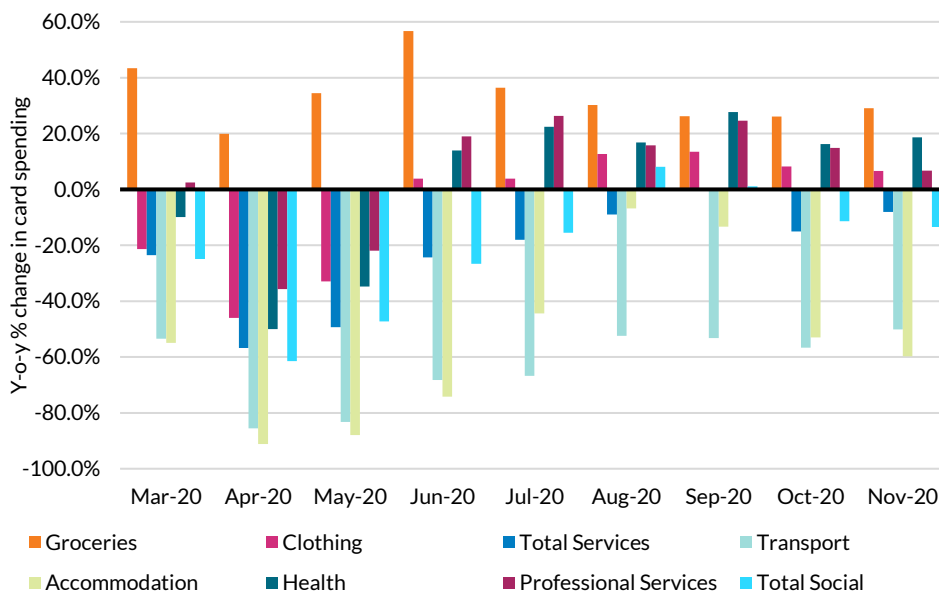
Note: Dataset updated 12/01/2021.

The impact of the tightening of restrictions in October on consumer spending, as well as on the labour market, was less severe than seen in the spring. Despite the move to Level 5 restrictions between late October and early December, retail spending remained relatively strong and at close to 2019 levels. Card payment data shown in Figure 4 illustrates that, while spending declined in November during Level 5 restrictions (by around 10% on the previous month and on 2019), this decline was much less significant than the one experienced between March and May 2020, when daily spending fell by up to 40% compared to 2019 levels in the same period. In December, spending grew to levels above the same month in 2019 as the economy reopened. It has since newly declined as new restrictions were imposed at the end of 2020.

Figure 4: Daily Debit and Credit Card Payments



Since March, consumers have significantly changed the way they spend and how they allocate their consumption across different goods and services. Online sales in November accounted for of retail sales, and particularly during the October/November Level 5 period have compensated for a sizeable share of the decline in physical retail sales. With the entertainment, tourism, restaurants and arts sectors more impacted by restrictions, and reflecting more precautionary behaviour on their part, consumers have significantly changed their spending patterns, with spending on groceries, furniture and home improvements benefiting. An overview of spending changes by sector is shown in Figure 5.

Figure 5: Changes in Spending by Sector

Source: Central Bank of Ireland, Card Payments Data

Note: While spending reduced overall for most sectors, card POS and online spending decreased less due to a switch from ATM to card payments.

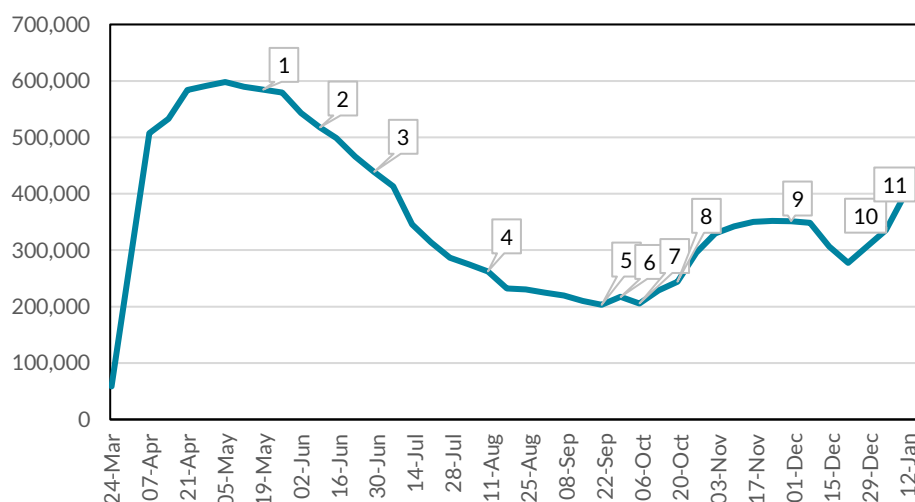
Savings levels have increased to historically high levels since the onset of the pandemic (See Box F). The savings ratio, the percentage of gross disposable income saved by households, rose to 35.4 per cent in the second quarter of 2020, as spending fell steeply during the spring. Precautionary behaviour and an inability to spend dampened consumption, while extensive Government support supported incomes (see Box D). The savings rate then returned to 21.4 per cent in the third quarter, but remains elevated. Between March and November 2020, Irish households have increased their deposits by €11.6bn. These additional savings will, in time, support consumption growth if the impact of the pandemic wanes.¹

While the number of recipients of the Pandemic Unemployment Payment (PUP) declined significantly over the summer months, since then the numbers in receipt of the PUP have fluctuated in line with the loosening and strengthening of restrictions. PUP numbers rose as new restrictions were introduced from the end of October, although to a much lesser extent than seen in the spring, as fewer activities were forced to close. Notably, construction remained open during this period, as did 'non-essential' retail. While the number of PUP recipients declined during December, with the introduction of more widespread restrictions in early January, the numbers

¹ For a detailed discussion of the impact of the pandemic on consumption and savings, see [Byrne, S., Hopkins, A., McIndoe Calder, T., and Sherman, M. The Impact of COVID-19 on Consumer Spending. Central Bank of Ireland Economic Letters, Vol 2020. No 15.](#)

on the PUP have increased again (by more than 180,000 since just before the holidays) and, with more sectors now closing temporarily, are expected to rise by more than was seen in October in the short-term. Figure 6 gives a timeline of developments in PUP claims and the main events affecting those claims across 2020.

Figure 6: PUP Claims Numbers Timeline



1. May 18th - Phase One re-opening, return of construction
2. June 8th - Phase 2 re-opening, return of retail
3. June 29th - Phase 3 re-opening, return of hospitality and other
4. August 7th - Laois/Offaly/Kildare Level 3 restrictions
5. September 18th - Dublin enters Level 3 restrictions
6. September 25th - Donegal enters Level 3 restrictions
7. October 6th - Nationwide Level 3 restrictions imposed
8. October 21st - Nationwide Level 5 restrictions imposed
9. December 1st - Phased re-opening of sectors
10. December 30th - Level 5 restrictions re-imposed
11. January 6th - Level 5 restrictions tightened for Construction, Education and other

Inflation has been negative since last April, brought about by a sharp fall in energy prices and an overall decline in consumer demand. These have been common factors across the euro area, although inflation in Ireland remains particularly subdued. In spite of the developments in the headline inflation rate, however, prices of goods that have seen an increasing share of expenditure by households due to the pandemic, such as groceries, have moved in the opposite direction.² The end of the Brexit transition period in January 2021 is also expected to lead to increases in import prices for some categories of goods.

The UK and EU concluded a new Trade and Cooperation Agreement on 24 December 2020, avoiding the damaging prospect of a no-trade deal WTO Brexit. Even with the agreement, EU-UK trade and migration flows will be

² See Kouvas et al. (2020), "[Consumption Patterns and Inflation Measurement Issues during the COVID-19 Pandemic](#)," in ECB Economic Bulletin, Issue 7/2020.

subject to a raft of new impediments arising from the UK's exit from the Single Market and Customs Union. The agreement preserves the zero tariff and quota free trade in goods that existed under EU membership. The departure of the UK from the European Union nevertheless puts an end to free movement of persons, goods, services and capital within the EU (See Box C).

Box A: The International Outlook

By Monetary Policy Division

In the second half of 2020, the global economy partly recovered from the depths to which it had plummeted during the first half of the year. Moreover, progress with COVID-19 vaccines and the start of their rollout lifted expectations and uncertainty receded. But the global economy's path back to pre-pandemic levels of activity remains prone to setbacks: as the COVID-19 pandemic continues to spread, many countries are reinstating partial or full lockdown and concerns are increasing that the escalation of infection rates associated with new mutant COVID-19 strains observed in some countries could penetrate borders over the coming months. After a fall of 4.2 percent this year, the OECD expects global GDP to rise by 4.2 percent in 2021 and a further 3.7 percent in 2022 (December 2020 forecasts). In October, the IMF projected global growth to be -4.4 percent in 2020, to rebound at 5.2 percent in 2021, and gradually slow to about 3.5 percent over the medium term. As forecasts rest on factors that are inherently difficult to predict, the uncertainty surrounding them is unusually large at present.

Euro area quarterly GDP increased by 12.5 percent in the third quarter of 2020, after having decreased by 11.7 percent in the previous quarter. Despite being the sharpest increase observed since the series started, the rebound in the third quarter did not offset the loss registered in the first half of the year, with GDP down by 4.3 percent compared with the same quarter of the previous year. In October, the euro-area unemployment rate was 8.4 percent, down from July's high of 8.7 percent but 1.2 percentage points higher than it was in February. After a steep decline in November, the Markit Eurozone Composite PMI (flash reading) rose from 45.3 to 49.8 in December, signalling that business activity came close to stabilising as stronger manufacturing output growth helped to counter a further drop in service sector activity. In December, the ECB revised its GDP growth projections for the entire forecast horizon; euro area GDP is now expected to have decreased by 7.3 percent in 2020 (up from the September forecast of -8.0 percent),

before increasing by 3.9 percent in 2021 (down from 5.0 percent), 4.2 percent in 2022 (up from 3.2 percent), and 2.1 percent in 2023.

Euro area annual HICP inflation was -0.3 percent in November 2020, stable compared with October. While negative headline inflation was mainly due to decreasing energy prices (-8.3 percent), underlying inflation remained subdued, with HICP inflation excluding energy and unprocessed food increasing by only 0.4 percent (stable compared to October). ECB projections for euro area inflation remained broadly unchanged, with an annual HICP inflation rate of 0.2 percent expected in 2020 (down from the September forecast of 0.3 percent), 1.0 percent in 2021 (unchanged), 1.1 percent in 2022 (down from 1.3 percent), and 1.4 percent in 2023.

In view of the economic fallout from the resurgence of the pandemic, in December the Governing Council (GC) of the ECB decided to increase the envelope of the pandemic emergency purchase programme (PEPP) by €500 billion to a total of €1,850 billion. The GC also decided to extend the reinvestment of principal payments from maturing securities purchased under the PEPP until at least the end of 2023, and to extend by twelve months, to June 2022, the period over which considerably more favourable terms will apply on the third series of targeted longer-term refinancing operations (TLTRO III). Forward guidance on the key ECB interest rates and the asset purchase programme (APP) remained unchanged.

In the United States, quarterly GDP increased by 7.4 percent in the third quarter of 2020 (after decreasing by 9.0 percent in the second quarter of 2020); compared with the same quarter of the previous year, GDP was lower by 2.9 percent. In November, the unemployment rate edged down to 6.7 percent, 8 percentage points lower than its recent high registered in April, but still 3.2 percentage points higher than it was in February.

At its December meeting, the Federal Open Market Committee (FOMC) of the US Federal Reserve maintained the target range for the federal funds rate at 0 to 0.25 percent. The FOMC expects it will be appropriate to maintain this target range until labour market conditions have reached levels consistent with the FOMC's assessment of maximum employment, and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time. In addition, the Federal Reserve will continue to increase its holdings of Treasury securities by at least \$80 billion per month and of agency mortgage-backed securities by at least \$40 billion per month until substantial further progress has been made toward the FOMC's maximum employment and price stability goals.

In the United Kingdom, quarterly GDP increased by 15.5 percent in the third quarter of 2020, after having decreased by 19.8 percent in the previous quarter. Despite the sharp rebound, GDP substantially decreased by 9.6 percent compared with the same quarter of the previous year. The outlook for the economy remains uncertain, given the evolution of infection rates associated with new mutant COVID-19 strains and the measures taken to protect public health. At its December meeting, the Bank of England maintained the Bank Rate at 0.1 percent and confirmed the continuation of its quantitative easing programme, maintaining the total target stock of asset purchases at £895 billion.

Macroeconomic Projections

Demand and Output

Following a sharp decline in economic activity in 2020, output is expected to remain subdued for the first half of 2021. The path of the Covid-19 pandemic will be the primary factor driving macroeconomic developments. Strict containment measures are likely to dampen activity significantly in the first quarter and, beyond that, some public health measures are likely to continue to be required, until the vaccine rollout reaches a significant proportion of the population. In the second half of the year, assuming an effective deployment of the vaccine, the economy should begin to recover. Contingent on these assumptions, modified domestic demand is forecast to grow by 2.9 per cent in 2021, while GDP is expected to grow by 3.8 per cent.

The new Trade and Co-operation Agreement between the EU and the UK, agreed on December 24th, avoided the damaging prospect of a no-deal Brexit on World Trade Organisation (WTO) terms. However, the degree of trade and economic integration between the EU and the UK is greatly reduced as compared to when the UK was an EU member. The forecasts published in the previous Bulletin, in October, assumed that trade with the UK, from 1 January 2021, would take place on WTO terms, and that there would be significant disruption in the transition to such an arrangement. While the substantial tariffs under WTO terms have been avoided, there will still be significant new barriers to trade for Irish firms in the form of increased documentary compliance and border delays. This will primarily affect trade with the UK, but Irish firms using the land bridge to deliver goods to continental Europe will also be impacted (see Box C).

The outlook for 2021 is highly uncertain, with the speed and efficacy of the vaccine deployment a key factor. Ongoing vaccination, both in Ireland and in its trading partners, will support a recovery in consumption,

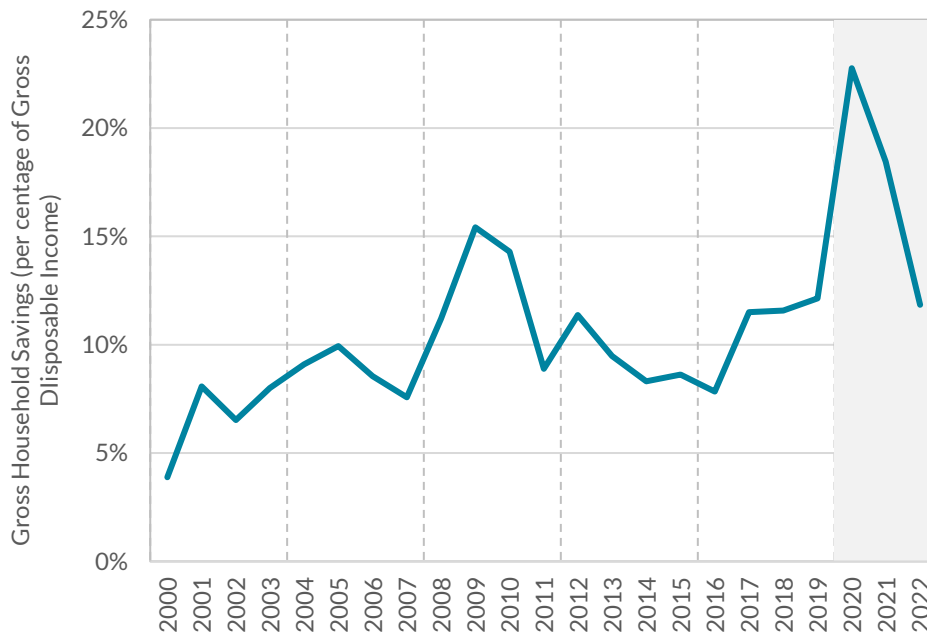
investment and trade in several ways. As the vaccine is administered to vulnerable groups who are most likely to be hospitalised by the virus, the requirement for the strictest type of lockdowns should be reduced. As the year progresses, the key variable determining a more widespread reopening of the economy will be the speed at which vaccines can be deployed. This is contingent on several factors, namely manufacturing of the vaccines, procurement, the deployment of a mass vaccination programme, and take-up. The macroeconomic projections here assume a successful gradual deployment of the vaccine during 2021, allowing for the gradual elimination of the need for containment measures that impact on economic activity by the first quarter of 2022. From mid-year, a significant pickup is expected as restrictions are relaxed, supporting consumer confidence.

Looking ahead, the economy is forecast to rebound further still in 2022, with modified domestic demand growing by 3.6 per cent and GDP growing by 4.6 per cent. Pent up demand, coupled with the expected unwinding of the large stock of savings accumulated during the pandemic, should support a recovery in consumption, while the reduction in uncertainty should support business investment. Nevertheless, some of the effects of the pandemic may continue to affect the labour market and to be felt in the lagged impact of investment not undertaken during 2020 and 2021 on wider economic activity.

Turning in more detail to the components of GDP, consumption is forecast to grow by 2.1 per cent this year. The more stringent containment measures announced on December 30th are likely to affect consumer spending adversely in the first quarter of 2021. Consumer-facing services sectors, such as hospitality and leisure, will again be the most affected, while the closure of non-essential retail will reduce the opportunity to spend. Ongoing precautionary behaviour with regard to contact-intensive activities could amplify this effect. However, since last spring, many firms have adapted and improved their online presence, which will mitigate the impact somewhat compared with that seen in the second quarter of 2020.

Accumulated savings will support consumption growth of 6.9 per cent in 2022. During 2020, the household savings ratio reached 35.4 per cent during the second quarter, significantly above its long run average. Similarly, increases in household deposits suggest that for many higher income households, while consumption has fallen, incomes have been largely unaffected. While some of these savings will be used to reduce debt/increase wealth, the unwinding will support strong consumption growth throughout the remainder of the forecast horizon. (Figure 7) The savings ratio is not envisaged to fall to its long run average until 2023.

Figure 7: Household Savings Ratio forecast to decline towards pre-pandemic levels

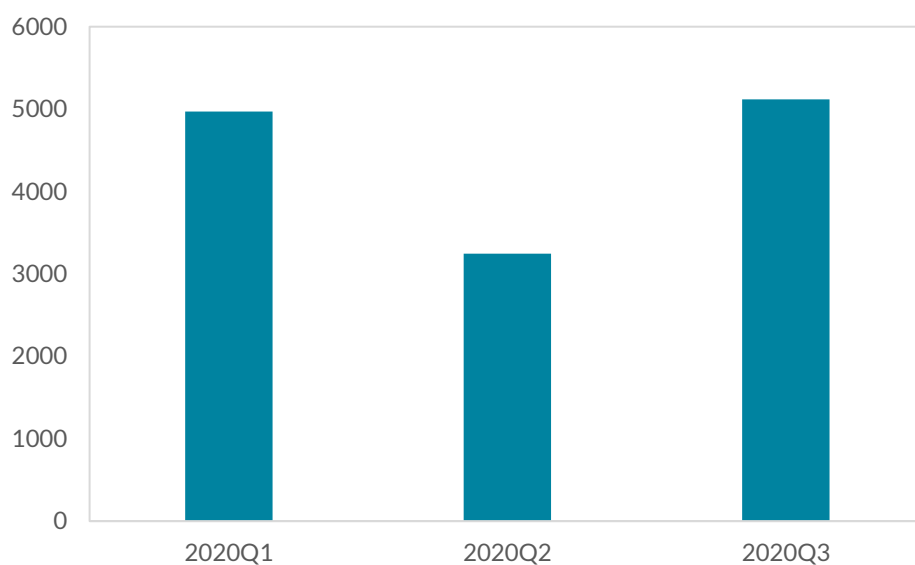


Source: CSO and CBI Calculation

Investment has held up better than expected in the face of the uncertainty around Brexit and COVID-19; it is now anticipated that modified investment fell by approximately 12 per cent last year.³ With the resolution of Brexit and a vaccine rollout underway, uncertainties should gradually dissipate and the outlook for investment begin to improve.

Construction sector activity rebounded following the closure of sites in April and May 2020 (Figure 8). While housing output is down on pre-COVID expectations, completions are on course to reach approximately 18,500 new units in 2020. New housing starts are estimated to have numbered around 22,000 by the end of 2020. Factoring in the temporary closure of non-essential construction for January 2021, new house completions of around 21,500 and 23,500 are forecast for 2021 and 2022, respectively. If site closures extend significantly beyond the current announced period, these forecasts would be negatively impacted.

³ Modified investment, which excludes multinational R&D related IP and aircraft leasing flows, declined by 9.3 per cent for the first three quarters of 2020, year-on-year. As has been the case in previous Bulletins, buoyant headline investment figures in 2020 clouded the underlying picture in the most recently available National Account data. The headline investment figure increased by 69 per cent in the same period, largely owing to a large increase in expenditure transfers related to intellectual property.

Figure 8: New Dwelling Completions by Quarter

Source: CSO

Non-residential construction investment is estimated to have declined by 15 per cent in 2020. The impact of the pandemic on office and retail investment over the projection horizon is expected to be minimal, and to relate primarily to the timing of the delivery of new investment. For example, a more sustained closure of sites in 2021 would reduce the prospect for some recovery in non-residential investment in 2021 and 2022. Over the longer term, considerable uncertainty surrounds the outlook for non-residential investment, the level of which was at a historical high in 2019. The pandemic may induce longer-term structural changes in firms' demand for office and retail space.

Modified machinery and equipment investment is estimated to have declined by 10 per cent in 2020. This a better performance than expected at the time of the last Bulletin.⁴ Imports of machinery and equipment, excluding transport equipment, declined by 3.2 per cent for the January to October period year-on-year in 2020. New goods vehicles licenced for the first time declined by 13.9 per cent over the January to November 2020 period year-on-year. Overall, modified investment is forecast to grow by 4.9 and 6.4 per cent in 2021 and 2022.

⁴ Machinery and equipment data was redacted to protect the source of IP flows in the first quarter of 2020, making full year estimates difficult.

Box B: Short-term Economic Outlook in a Severe Scenario

By Irish Economic Analysis Division

The severe scenario assumes the current, tightened public health restrictions need to be maintained in place for a longer period. These sustained restrictions would continue to dampen economic activity in all sectors of the economy until successful medical treatments are in place. In the severe scenario, it is assumed that medical interventions are not sufficient to allow for a full easing of containment measures until 2023, outside the forecast horizon. However, monetary and fiscal policies are assumed to mitigate very severe financial amplification effects.

Table 1 Baseline and Severe Scenario Forecasts

	2020e	2021f	2022f
GDP (Severe Scenario)	2.5	1.5	2.3
GDP (Baseline Scenario)	2.5	3.8	4.6
MDD (Severe Scenario)	-7.1	0.6	1.4
MDD (Baseline Scenario)	-7.1	2.9	3.6
Unemployment Rate (Severe Scenario)	6.2	13	11.6
Unemployment Rate (Baseline Scenario)	6.2	9.3	7.8

Source: CBI Calculation

Under this scenario, GDP and modified domestic demand (MDD) growth are envisaged to remain significantly below trend throughout the projection horizon. GDP is forecast to grow by 1.5 per cent in 2021, supported mostly by continued resilience in the pharmaceutical and high value services sectors. Consumption would continue to be dampened, particularly in the first half of the year, by a reduction in opportunities to spend, but also by deteriorating sentiment as the pandemic persists. The pick-up in growth in 2022 envisaged in the baseline, supported by consumption out of accumulated savings, would not occur until 2023 in the severe scenario, as uncertainty persists until at least the last quarter of 2022.

In the labour market, the level of unemployment remains significantly elevated at the end of the forecast horizon, notwithstanding a gradual decline from the peak reached in 2021. This reflects the expectation that, in the severe scenario, the worst affected sectors will have capacity only

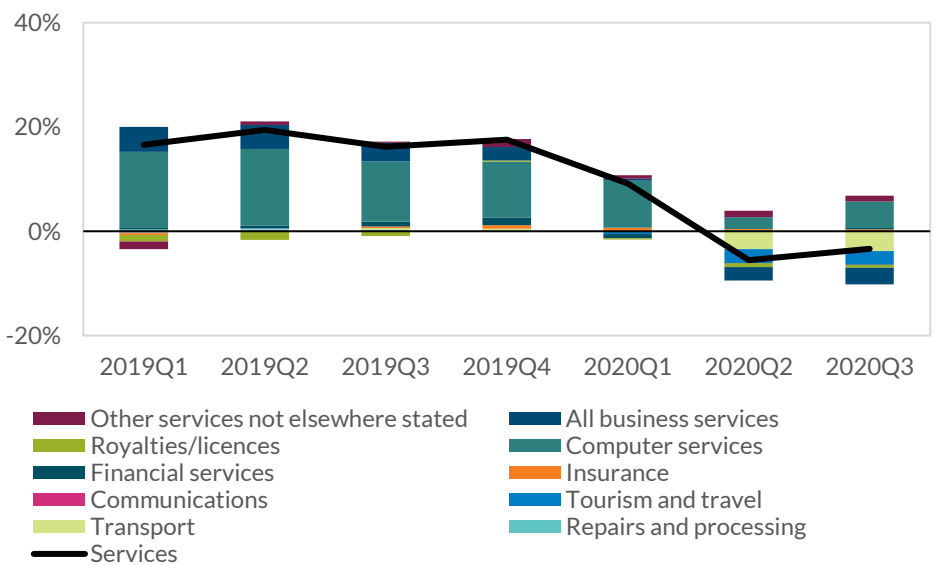
to employ a much smaller proportion of the labour force than prior to the coronavirus crisis.

Net Trade

Despite the downturn in global trade, Irish exports grew by 4.3 per cent in the first three quarters of 2020 compared with the same period in 2019.

The resilience of exports reflects strong growth in high-value exports of pharmaceuticals, computer services and business services (Figure 9). Contract manufacturing, where Irish headquartered firms “contract” firms in another country to produce goods for export to a third country, also rebounded strongly after first quarter weaknesses owing to factory shutdowns in China. In the fourth quarter, preliminary indicators suggest export growth remained strong, although merchandise exports fell slightly in October. Overall, we estimate that exports grew by 4.2 per cent during 2020.

Figure 9: Services Trade held up by strong exports of computer services



Source: CSO and CBI Calculations

Looking ahead, the forecast for export growth in 2021 has been revised upwards, compared with the previous Bulletin. The positive news on the coronavirus vaccine, as well as the EU-UK Free Trade Agreement, will mean stronger demand from Ireland’s main trading partners. Moreover, large imports of intellectual property to Ireland during 2019 and 2020 are likely to be reflected in increased exports of computer and business services, as well as pharmaceutical products, during 2021 and 2022. Exports are

forecast to grow by 3.5 per cent during the year, supported by a gradual recovery in the global economy in the latter half of the year, and a continued expansion in pharmaceuticals, business and computer services exports.

However, new barriers in trade in goods and services with the UK are likely to reduce exports from certain sectors, particularly agri-food. While tariffs have been avoided, exporting firms will face significant non-tariff barriers compared with 2020. In the short-term, this may also affect exports by some sectors to continental Europe. This should be alleviated as new shipping routes direct to the continent are established. In 2022, the domestic exporting sector will benefit from the overall recovery in the global economy and trading partner demand. Overall, exports are forecast to grow by 5.1 per cent in 2022.

Box C: The EU-UK Trade and Cooperation Agreement

By Thomas Conefrey

The EU and UK concluded a new Trade and Cooperation Agreement on 24 December 2020, avoiding the damaging prospect of a no-trade deal WTO Brexit. Even with the agreement, EU-UK trade and migration flows will be subject to a raft of new impediments arising from the UK's exit from the Single Market and Customs Union. This Box summarises the main changes to EU-UK trading arrangements in place since 1 January and reviews the estimated impact on the UK economy and on Ireland in the long run.

Following a negotiation period which formally began on 2 March 2020, on Christmas Eve the EU and UK reached agreement in principle on a Trade and Cooperation agreement.⁵ The Brexit transition period ended on 31 December 2020 and the new agreement took effect from 1 January 2021. The agreement is being provisionally applied while procedures to conclude it are completed. The deal reduced the uncertainty and disruption that would have occurred at the end of the transition period in the absence of a deal. The agreement preserves the zero tariff and quota free trade in goods that existed under EU membership and goes beyond EU free trade agreements with Canada or Japan by allowing for tariff and quota-free access on all goods that comply with the appropriate rules of origin. This is especially important for exposed sectors such as agri-food. Without the agreement, exports of certain meat or dairy products would have faced tariffs above 40 per

⁵ See https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2531

cent under WTO rates. The deal also allows for cooperation in other areas such as investment, competition, State aid, air and road transport, energy and sustainability.

Even with the agreement, the degree of trade and economic integration between the EU and UK will be greatly reduced compared to what existed while the UK was an EU member. The UK has left the EU Single Market and Customs Union, as well as all EU policies and international agreements. This puts an end to free movement of persons, goods, services and capital within the EU. Instead of harmonised rules and standards, the EU and the UK will form two separate markets and two distinct regulatory and legal spaces. This inevitably creates new barriers to trade in goods and services, and to migration, affecting citizens and businesses.

Focusing on trade, the following is an overview of the new frictions that face firms trading under the terms of the new EU-UK agreement:

1. **Rules of Origin:** Rules of origin are a key component of Free Trade Agreements (FTAs). The purpose of the rules are to ensure that the products benefiting from the terms of the free trade agreement (in this case, zero tariffs and quotas) are either wholly obtained from or manufactured in the free trade area itself (in this case, the EU and the UK), or sufficiently manufactured or processed there. The rules of origin certify that the trade preferences granted under the Agreement benefit EU and UK operators rather than third countries. Due to the complexity of modern supply chains, which sometimes span multiple countries around the globe, establishing the economic nationality of a product can be highly complex and costly. Estimates of the cost of compliance with rules of origin requirements vary but have been estimated at between 2 and 6 per cent of a product's final value.⁶ On top of the direct costs, the additional border administration can also disrupt just-in-time supply chains. According to Lowe (2018), the sectors which typically find rules of origin most burdensome include vehicles, textiles, food and machinery.⁷ There is already some evidence of disruption to the EU-UK food

⁶ See Keck, A and A. Lendle. 2012. "New Evidence on Preference Utilisation". Available at: https://www.wto.org/english/res_e/reser_e/ersd201212_e.pdf

⁷ See Lowe, S. 2018. "Brexit, rules of origin and barriers to trade." Available at: <https://encompass-europe.com/comment/brexit-rules-of-origin-and-barriers-to-trade>

supply chain as a result of new rules of origin checks since 1 January.⁸

- 2. Customs controls:** With the UK outside the EU Customs Union, all customs controls and formalities required under EU law (as set out in the Union Customs Code), including entry and exit summary declarations, apply to all goods entering the EU from the UK, or leaving that customs territory to the UK. Products exported from the EU to the UK will need to comply with UK technical regulations and will be subject to any applicable regulatory compliance checks and controls. Similarly, goods imported from the UK to the EU will be subject to regulatory compliance obligations, checks and controls for safety, health and other public policy purposes.⁹ The UK's border operating model allows for a phasing in of controls on EU to GB trade, partly because some border infrastructure has yet to be constructed. In relation to the movement of goods from GB into the EU, Hayward (2020) notes that the new EU-UK agreement contains few friction-reducing measures with no adaptation period, no substantive derogations and few of the legal means of reducing the need for checks and controls.¹⁰ For traders in the UK and EU, compliance with the new customs controls will require additional resources, paperwork and cost. Firms in Ireland who previously used the UK landbridge to transport goods to and from the continent face particular difficulties as the movement of goods via this route will be subject to new checks and delays. New direct shipping routes to the continent have commenced as an alternative to the use of the landbridge. These routes, however, involve longer shipping times and additional costs may be incurred transporting goods in this way.
- 3. Sanitary and Phytosanitary (SPS) requirements:** Along with customs controls on all goods described in (2), agri-food products are subject to additional SPS checks. SPS measures are rules defined by the importing party necessary for the protection of human and animal health ("sanitary") and plant health ("phytosanitary"). The EU, like all developed countries, has extensive regulations on food and drink products to ensure high levels of food safety and to reduce possible health risks to citizens. With the UK outside the Single Market, UK agri-food

⁸ See <https://www.ft.com/content/c068fc5f-dfe4-4890-8153-a59e1833c100>

⁹ See https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_2532

¹⁰ See Hayward, K. 2020. "What Brexit Means for Britain's Borders." Available at: <https://ukandeu.ac.uk/what-brexit-means-for-britains-borders/>

producers will be treated similarly to food exporters from any other non-EU country and will need to prove that their products meet all EU SPS import requirements. In the same way, EU agri-food exporters will need to meet UK SPS import requirements. These controls include the verification of health certificates as well as, in some cases, physical inspections by vets at border control posts.

4. **Services:** As an EU member, UK businesses could supply services freely across the EU based on common rules, a single supervisory framework and a common jurisdictional system. From 1 January, UK service suppliers lost the automatic right to sell services across the EU. UK service firms trading in the EU will have to comply with host-country rules in each Member State and will no longer benefit from the country-of-origin principle or passporting rights for financial services. Automatic mutual recognition of professional qualifications no longer applies which means that doctors, nurses, vets, engineers, architects etc. must have their qualifications recognised in each member state that they wish to practice in. For financial services, the EU-UK agreement does not include any elements related to equivalence frameworks for financial services. Equivalence decisions in respect of 28 areas are currently outstanding by the European Commission pending further clarifications from the UK. Equivalence decisions are unilateral decisions of each party and are not subject to negotiation. To continue operating, some UK firms may need to establish a presence in an EU country and some financial sector firms have already relocated from London to Dublin and other EU locations prior to the end of the transition period in December 2020.

In summary, while EU membership minimised trade frictions between countries, the new EU-UK FTA – although it eliminates tariffs – reintroduces a series of barriers to trade. Moreover, while this Box has focused on trade flows, the mobility of people between the EU and UK will also be restricted relative to EU membership.¹¹

Estimating the precise impact of the non-tariff restrictions to goods and services trade flows described above, as well as the effect of reduced EU-UK migration flows, is a difficult task and any estimates are subject to considerable uncertainty. For instance, by how much and when will trade be reduced due to rules of origin checks, customs procedures and SPS

¹¹ The provisions in the Northern Ireland protocol mean that new customs and regulatory checks will not apply to Ireland-Northern Ireland trade.

checks? What will be the impact of the new barriers to services trade? The answers to these questions will depend on a range of considerations, including the underlying viability of certain sectors and their capacity to absorb or pass on higher trade costs, how individual firms and citizens adapt over time to the new restrictions and the degree to which public authorities and others involved in the logistics of trade can minimise the impact of new controls and border checks.

Table 1: Estimated Impact of a FTA on UK GDP relative to EU Membership

Source	Published	Estimated long-run impact on UK GDP
Bank of England	Nov-18	-3.75
HM Government	Nov-18	-3.4 to -6.4
IMF	Nov-18	-2.6 to -3.9
NIESR	Nov-19	-3.5
OECD	Oct-20	-3.5 to -4.2
UK Trade Policy Observatory (U. of Sussex)	Dec-20	-4.4

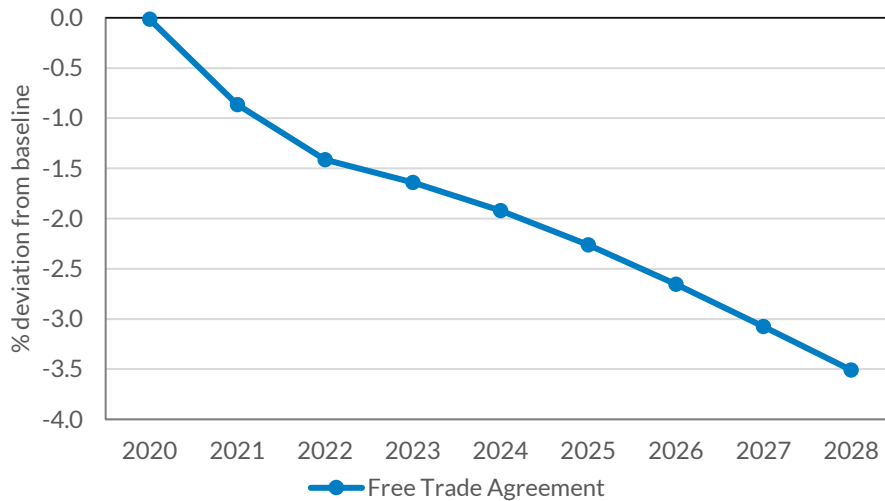
Notwithstanding these uncertainties, there is consensus from a range of official estimates that trading under the less comprehensive terms of the new EU-UK FTA – and the more distant economic relationship it embodies – will have a negative impact on economic activity relative to EU membership. Although estimates of the impact of the specific new EU-UK trade agreement have yet been published, several studies have modelled the effect on the UK economy of a basic FTA (Table 1). These studies incorporate estimates of the effect of the non-tariff barriers to goods and services trade described above along with the effect on the UK of lower FDI and migration. While there is significant variation across studies, the range of estimates shown in Table 1 indicate that moving from EU membership to a FTA would reduce UK GDP by over 3 per cent in the long run.

Although the importance of the UK market has declined over time, it is still the destination for around 10 per cent of Irish goods exports and 15 per cent of services. For some firms and sectors, the exposure to the UK is larger than indicated by these economy-wide figures.¹² If there is a

¹² See Smith, D., Fahy, M., Murphy, G. and B. O'Connor. 2017. UK EU Exit: Trade Exposures of Sectors of the Irish Economy in a European Context. Available at: <https://assets.gov.ie/7020/674061271c784b90a2dd9a4a65b8053d.pdf>; Lawless, M. 2018. "Intermediate Goods Inputs and the UK Content of Irish Goods Exports." Available at: <https://www.esri.ie/system/files/media/file-uploads/2018->

negative impact on the UK economy from the new EU-UK FTA in line with the estimates in Table 1, then this will reduce UK demand for Irish imports thereby lowering output and employment in Ireland.

Figure 1: Estimated impact of EU-UK FTA on Irish Output, % deviation from no-Brexit Baseline



Source: Conefrey and Walsh (2020).

In addition, the new customs and regulatory barriers are likely to reduce Ireland-UK trade directly. As well as affecting exports, around one quarter of Irish goods imports come from the UK. Half of these imports are intermediate goods used as inputs in the manufacturing sector in Ireland.^{13,14} An increase in the cost of sourcing these intermediate goods as a result of supply chain disruption could damage the international competitiveness of the traded sector in Ireland. Putting these different effects together, previous Central Bank estimates using NIESR (2019) suggest that moving to a FTA would reduce Irish output by just under 1 per cent in the first year and by around 3.5 per cent in the long-run relative to EU membership (Figure 1).¹⁵ In the absence of a trade deal and where WTO arrangements had applied, the losses would have been

[06/BKMNEXT362.pdf](#) and Conefrey, T. (2018). "Irish Agriculture: Economic Impact and Current Challenges." Available at: <https://bit.ly/3iqrzQJ>

¹³ See Central Bank of Ireland. 2020. "Risks Facing the Irish Economy at the End of the Brexit Transition Period." Quarterly Bulletin No. 4 2020. Available at: <https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/boxes/qb4-2020/box-a-risks-facing-the-irish-economy-at-the-end-of-the-brexit-transition-period.pdf>

¹⁴ See Lawless (2018).

¹⁵ See Conefrey, T. and G. Walsh. 2020. "EU-UK Trade and the Irish Economy after Brexit." Available at: [https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/quarterly-bulletin-signed-articles/dealing-with-friction-eu-uk-trade-and-the-irish-economy-after-brexit-\(conefrey-and-walsh\).pdf?sfvrsn=5](https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/quarterly-bulletin-signed-articles/dealing-with-friction-eu-uk-trade-and-the-irish-economy-after-brexit-(conefrey-and-walsh).pdf?sfvrsn=5)

significantly larger. Due to the disruption and uncertainty that would have materialised without a trade agreement, it is also likely that the fall in output in Ireland would have been front loaded. In contrast, the reduction in output under an FTA is expected to be smaller and to cumulate more gradually over time.

The new EU-UK Trade and Cooperation Agreement averted the threat of a no-deal WTO Brexit and means that the significant disruption to economic activity that would have accompanied such an outcome has been avoided. The agreement allows for the continuation of a basic economic relationship between the EU and UK and there are likely to be some opportunities for the Irish economy in the long run as the agreement becomes established. Nevertheless, the EU-UK FTA makes trade in both goods and services more cumbersome and costly relative to EU membership. In the short run, this is likely to be associated with continued supply-chain disruption. In the long run, the negative impact of the UK's EU exit on trade flows, migration and productivity will reduce output in the Irish economy.

The Labour Market

Employment levels are estimated to have declined by 1.7 per cent on average during 2020 with a further decline of 4 per cent forecast for 2021. The rebound in economic activity in Q3 2020 saw a partial recovery in employment levels following a large decline in the second quarter. However, overall employment remained 1.4 per cent lower (31,700 jobs) relative to Q3 2019. The stepping-up of health restrictions between October and early December 2020 resulted in further employment losses, though these were mitigated by differences in the breadth of restrictions compared to those in March, as a wider range of economic sectors were allowed to remain open. The introduction of full Level 5 restrictions, in Q1 2021, is expected to result in a further sharp, but temporary, decline in employment levels as PUP figures rise for the construction and education sectors among others.

Looking ahead, the second half of 2021 is projected to see a gradual but sustained pickup in employment growth, as the deployment of vaccines is assumed to allow for a more widespread reopening of the economy. Still, the delayed impact of more than a year of closures on some sectors will mean that employment will remain below its pre-Covid level throughout the forecast horizon. For employment to recover to pre-pandemic levels, either sectors that were worst affected by the pandemic will have to recover fully, or other sectors will have to grow faster in order to absorb

the excess labour capacity. While this process is expected to begin in earnest in 2022, it will not be complete until beyond our projection horizon. Taking all of this in to account, a more sustained pickup in the economy is forecast to support 3.2 per cent growth in employment in 2022.

Similar to the second quarter of 2020, employment losses in the third quarter were disproportionately greater amongst younger workers and part-time workers. Part-time employment declined by 6.7 per cent on an annual basis while full-time employment remained relatively unchanged. The majority of part-time employment loss occurred in the accommodation and retail sectors. On a sectoral basis, seven of the fourteen sectors experienced annual employment declines with the greater rates of decrease in accommodation (-16.1 per cent), administration (-13.4 per cent) and other NACE sector activities, which is inclusive of arts, entertainment and physical wellbeing activities (-10.7 per cent). In contrast, significant annual employment increases were evident in the financial (8.2 per cent) and professional, scientific and technical activities (7 per cent) sectors.

The labour force grew by 0.6 per cent in the year to Q3 2020. Continued containment measures are likely to result in lower levels of net inward migration during 2021. However, the gradual rollout of vaccinations are forecast to bring some recovery in inward migration levels towards the end of the forecast horizon. CSO migration estimates up to April 2020 show a moderation in net figures from 33,700 in 2019 to 28,900 in 2020. Net migration is assumed to make a neutral contribution to labour force growth until the second half of 2021 before increasing at a slow and incremental rate. The labour force is forecast to decrease by 0.4 and 0.8 per cent in 2020 and 2021, respectively, before increasing by 1.6 per cent in 2022.

Measurement of the unemployment rate has been distorted by the support measures put in place. This means that the official unemployment rate, produced by the CSO, remained constant at around 5 per cent throughout the second quarter of 2020 despite several hundred thousand people receiving the pandemic unemployment payment. The reasons for this are outlined in detail in Box D Quarterly Bulletin 4, 2020. In summary, this was because those who are in receipt of the PUP payment have a reasonable expectation of returning to work for their employer, and so do not meet the definition of “unemployed” in the official statistical sense. As the year progressed, more of these individuals transitioned from “employed (albeit on furlough receiving PUP)” to “unemployed”. This led to the unemployment rate increasing to 7.1 per cent in Q3 2020. This was the largest quarterly increase observed since the financial crisis with a rise of 56,000 persons. This higher rate continued in the fourth quarter. The CSO seasonally-adjusted monthly unemployment rate for December was 7.2 per cent. The COVID-adjusted rate, inclusive of PUP recipients, reached 20.4

per cent, yet remains below the peak value of 30.4 per cent recorded in April 2020.

Looking ahead, the unemployment rate will continue to rise throughout the first half of the year before employment growth begins to support a decline in the fourth quarter of 2021 and throughout 2022. The unemployment rate is projected to increase to 9.3 per cent in 2021 before moderating to 7.9 per cent in 2022.

Job vacancy data from Indeed show that postings levels at end-November are 20 per cent below the equivalent period last year, showing growth from the trough of 57 per cent at end-June. The strongest performing roles are related to medical information, community and social service and nursing, with levels down markedly in consumer-facing sectors such as tourism and hospitality.

Table 2: Labour Market Developments

	2019	2020f	2021f	2022f
Employment (000s)	2,323	2,283	2,191	2,262
% Change	2.90	-1.7	-4	3.2
Labour Force (000s)	2,444	2,434	2,414	2,454
% Change	2	-0.4	-0.8	1.6
Unemployment (000s)	121	151	223	192
Unemployment Rate (%)	5	6.2	9.3	7.8

Inflation

The adoption of the EU-UK trade deal will avoid an increase in goods prices through tariffs, but non-tariff barriers will add costs to trade, which may pass through to consumer prices. Non-tariff barriers include higher transport costs, administrative costs, quantity limits, barriers from licencing, labelling, standards, sanitary and phyto-sanitary rules. Moreover, since a significant proportion of Irish imports use the UK as a land bridge, a greater amount of consumer products could be affected by greater non-tariff barrier effects like higher administrative and transport costs. While the EU and UK are coming from a hitherto-harmonised approach with respect to many standards and regulations, there is evidence that increased administrative costs associated with the goods coming both from and through the UK is affecting some imported goods prices.

With regard to the outlook for inflation, depressed domestic demand is likely to dominate price developments during the first half of 2021.

Exchange rate factors are also likely to weigh on prices, with a weaker

sterling and dollar lowering imported good prices. Upward pressures on prices are likely to come from higher oil prices, which will pass through to energy prices in 2021. As pandemic-related restrictions begin to ease and consumer spending recovers, demand should start to add to price pressures in the later stages of 2021.

The headline HICP is forecast to increase by 0.6 and 0.8 per cent in 2021 and 2022. Core HICP inflation, which excludes energy and food price developments, will remain weak in 2021 at -0.2 per cent before increasing to 0.5 per cent in 2022.

Box D: Employee earnings and income dynamics during COVID-19

By Reamonn Lydon

Household savings grew strongly in 2020 due to a combination of sharply lower consumer spending and resilient household income. Income supports for workers experiencing reduced hours or job losses because of the pandemic have heavily mitigated the earnings shock. Within this group, under-25s benefited most, and females are less negatively impacted than males.

One of the most striking consequences of the COVID-19 economic shock is the jump in household savings. The savings ratio for the household sector was 37 per cent in the second quarter of 2020, falling to 21 per cent in the third quarter (line in Figure 1). Over €13 billion was added to household deposits in the year to November 2020. This does not imply that all households were saving more in 2020. As we show below, the negative income shocks experienced by many means this is highly unlikely.

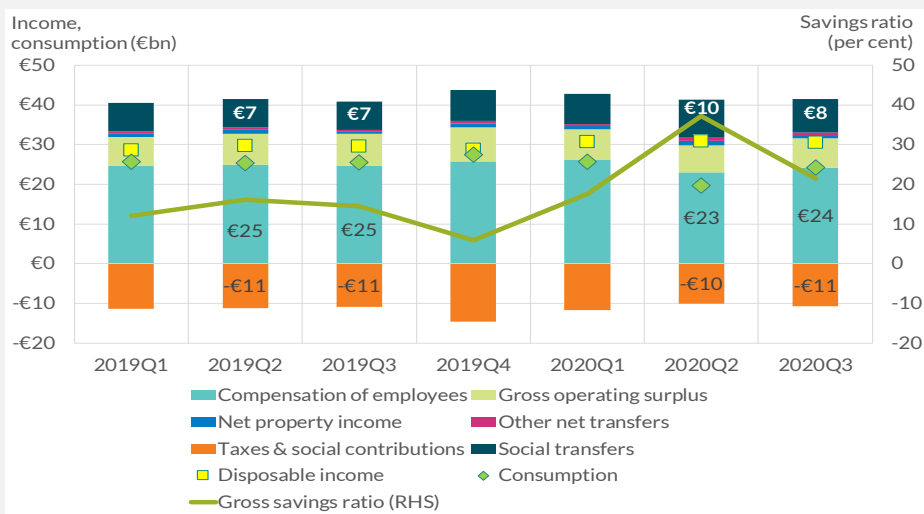
The well-documented decline in consumer spending during 2020 is one reason for the increase in savings for the household sector. Consumption expenditure was down by almost 22 per cent in the second quarter, before recovering somewhat in third quarter (the green diamonds in Figure 1).

The fact that aggregate household income has held up in 2020 (yellow squares in Figure 1), growing by over 4 per cent year-on-year, is also contributing to higher savings in the face of falling consumption. In a year when numbers in work were down by almost a quarter at the trough, this level of aggregate income growth is remarkable. The decomposition of disposable income in Figure 1 explains what's going on.

Compensation of employees fell in 2020 as numbers in work declined, but perhaps less than might be expected, given the large scale job losses. There is a large, offsetting increase in social transfers in the second (+€3 billion) and third (+€1 billion) quarter – including the Pandemic Unemployment Payment – which helped to sustain incomes.

Beneath these aggregate trends, there is a lot going on. The aim of this box is to highlight some of the key changes, particularly in earnings, which could have a bearing on developments in 2021 and beyond.

Figure 1 Composition of income, consumption trends, and the savings ratio



Source: CSO Institutional Sector Accounts (non-financial), Q3 2020. All data is nominal unadjusted.

The fact that not all households have labour income, and, for those that do, pandemic job losses are more common amongst lower earners, mitigates the overall impact on aggregate household income

Not all households are exposed to the pandemic labour income shock, simply because not all households have labour income (excluding pensions). In Ireland in 2019, this was around 630,000 households, or one-third of all households (SILC 2019). Many of these households are retired, with two-thirds aged 65 or over. Incomes in this group tend to be lower on average. This means that they account for a smaller share (one-fifth) of aggregate household income.

Amongst households with labour income, earnings account for less than half of total household income for three-in-ten of them. For four-in-ten households with labour income, earnings account for at least three quarters of household income.

As noted in the October 2020 Quarterly Bulletin, the concentration of the pandemic labour market shock amongst workers in the bottom half

of the earnings distribution is one of the reasons for the [resilience of Income Tax in 2020](#) (the progressivity of the income tax schedule also matters). It also has implications for the impact of pandemic job losses on aggregate earnings and income trends.

In 2020, over 70 per cent of PUP recipients come from just five sectors – Accommodation and Food Services, Wholesale & Retail Trades, Administrative and Support Services, Arts, Entertainment and Recreation Services, and Construction. Almost 60 per cent of wage subsidy recipients are in these sectors.¹⁶ These sectors account for a quarter of aggregate labour income (SILC 2019), and 36 per cent of pre-pandemic employment (LFS 2019). The relatively low labour income share is due to a combination of both lower pay and fewer hours worked.¹⁷ In fact, two-thirds of employees in these sectors earn less than the median level of earnings in the population (SILC 2019). In other sectors, the share earning below the median is 45 per cent. The average earnings of workers in the top-five PUP sectors in 2019 was €28,500, compared with €40,100 in all other sectors (SILC 2019).

The overall effect of both these factors is a lower impact on *aggregate* household incomes and earnings in 2020 than the large scale job losses suggest.

This *does not* mean that *individual* households and workers are not experiencing income losses and the hardship that comes with that. As we show in the next section, many workers experience large falls in earnings in 2020, even when PUP and wage subsidy supports are taken into account.

Earnings in 2020 by recipient and non-recipient of income supports

The policy response to the pandemic, and specifically income supports for affected workers, is the other key factor under-pinning incomes in 2020. A recent [CSO release](#) highlights just how important these supports are. Using the administrative sources to Q3 2020 – including payroll, wage subsidy and PUP data – the release tracks the median earnings for the same individuals with and without pandemic income supports.¹⁸

¹⁶ PUP and wage subsidy sector data from the CSO Live Register tables, weeks 18-48 and 18-34 respectively.

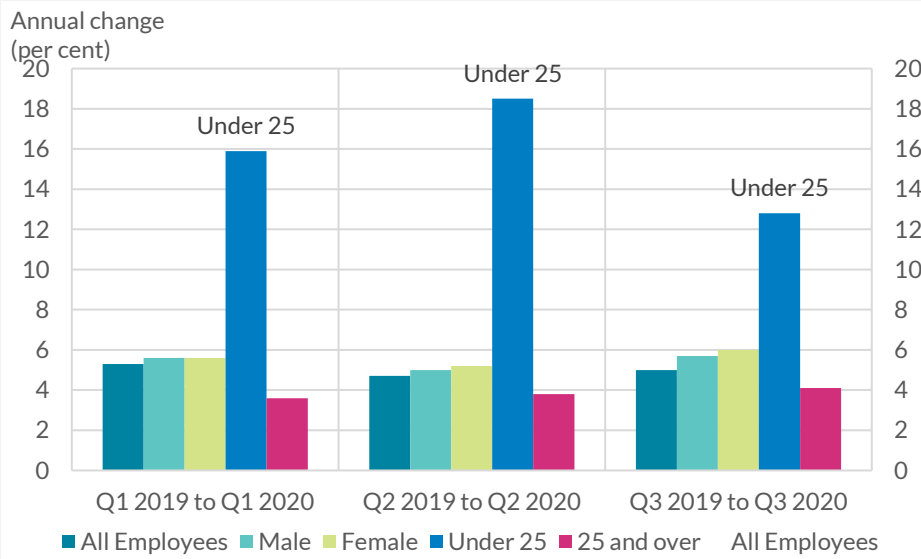
¹⁷ For example, 74 per cent of minimum wage workers in the State are in these five sectors (LFS, 2019), accounting for one-in-eight workers in these sectors; 54 per cent of part-time workers are in the same five sectors, accounting for almost one-third of workers in these sectors.

¹⁸ The median is the point in the earnings distribution above/below which half of employees earn more/less. It is usually thought of as the statistic that captures the experience of the 'typical' worker, as opposed to the mean or average which can be skewed by extreme observations of very low or very high earnings.

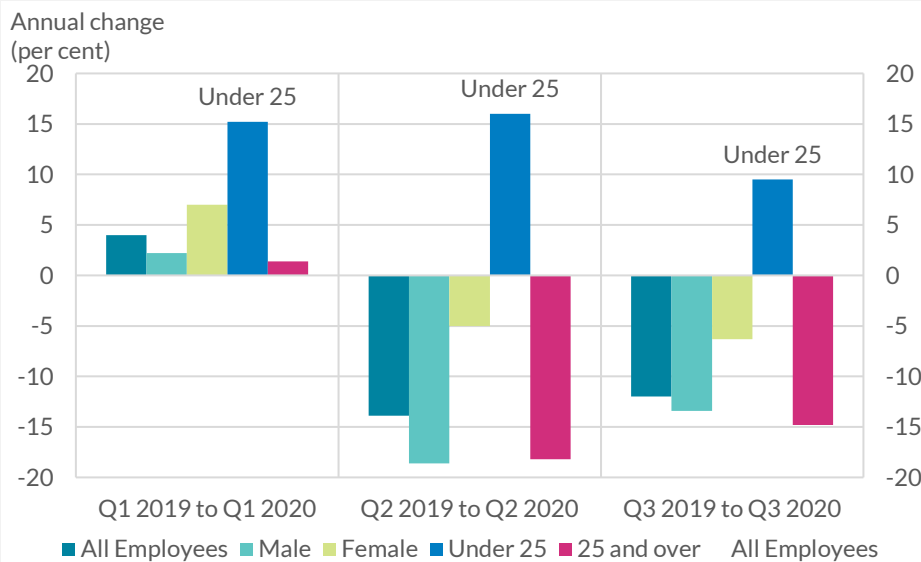
Median earnings of *non-recipients* grew steadily in each of the first three quarters of 2020, at around 5 per cent for all workers (top panel in Figure 2). There are no significant differences in median earnings growth by gender.

Figure 2 Annual percentage change in median weekly earnings

Non-recipients of pandemic income supports



Recipients of pandemic income supports (PUP + wage subsidies)



Source: [CSO, December 2020, Table 3.2.](#)
Earnings for recipients includes PUP and/or wage subsidies.

The main differences are by age. The median earnings of younger non-recipient workers (under-25) grew by 18 and 13 per cent in the second and third quarters respectively. It is important to point out that part of the reason for such high growth rates for younger workers is that the

CSO is comparing the growth in median earnings *for the same employees* who are working in both 2019 and 2020 (a ‘matched cohort’ approach). This means the growth also picks up the effect of a steep age-earnings profile for these workers. Annual increases of the order of 10 per cent are not uncommon between the ages of 20 and 25, particularly amongst third-level graduates.¹⁹

The bottom panel in Figure 2 shows the growth in median earnings by quarter for recipients of income supports.²⁰ ‘Earnings’ here is defined as employee earnings *plus* any income from either PUP and or wage subsidies. The year-on-year growth in the first quarter is broadly similar to the non-recipient group for the same period. In the second quarter, earnings drop considerably for all groups, bar under-25s. For males and over-25s, median earnings fell by 18-19 per cent in the second quarter. There is some claw back in the third quarter, with smaller annual falls of 13-14 per cent. There is no sector decomposition in the CSO data, but the return to work by construction workers, who earn more on average, could be partly to explain.²¹ There are also proportionately more younger (under-25) and/or female and part-time recipients in the third quarter, who earn less on average and therefore PUP and wage subsidy supports could be expected to be higher in comparison to their 2019 earnings.

Comparing earnings growth across the distribution ([Figure 3.4 in the CSO release](#)), recipients in the top quintile – that is, the top 20 per cent of earners – experienced the largest fall in earnings, at almost *minus* 23 per cent. Similar to the earlier point, this partly reflects the fact that both younger and female workers, who are less negatively affected, are also more likely to be found in the lower half of the earnings distribution – and the first quintile in particular.

Figure 3 quantifies the impact of supports on the median earnings of all employees. As the median without supports can include observations of zero earnings, this will drag down year-on-year growth rates significantly. The other important caveat for this comparison is what the counterfactual support would be *without* PUP or wage subsidies. As the basic job seekers payment (without top-ups) is lower than the PUP, it

¹⁹ See Figure 9 in [LeBlanc and Lydon \(2019\)](#).

²⁰ By April 2020, around 44 per cent of the labour force, or close to half of all workers, were receiving either PUP (25 per cent) or Wage Subsidies (19 per cent). See Figures 2 and 3 in [Lydon and McGrath \(2020\)](#).

²¹ Compared to the four other sectors with high PUP take-up in 2020, construction workers earn over 50 per cent more on average (SILC 2019)

would likely be lower than the actual (solid) line in the charts, but above the ‘without supports’ (dashed) line.

Even with these caveats, it is clear that combined income supports heavily mitigated the negative earnings shock. In the second quarter of 2020, for all employees, median earnings growth without supports is -15 per cent, not the -6.5 actually observed. Remarkably, by the third quarter, the annual growth rate including the supports is closing in on zero (-0.9 per cent).²² For females, it is above zero (+0.2 per cent). Generally, the levels by gender are slightly different but the ‘gap’ (with/without supports) is similar. Once again, the under-25 age group stands out. Without supports, median earnings would be almost 50 (22) per cent lower in the second (third) quarter. Instead, median earnings actually show strong positive growth, of 10 (3) per cent.

Figure 3 Growth in median earnings with/without COVID-19 supports (grouping recipients and non-recipients)



Source: [CSO, December 2020, Table 3.5.](#)

²² At this stage, it is important to re-emphasise that this is the growth rate in median earnings, that is for the ‘typical worker’. Growth in total or average earnings (and income) could be higher or lower.

Conclusion

Despite large-scale job losses during the year, household income has held up in 2020 for several reasons. Firstly, a large number of households have little or no reliance on income from work. Second, for those in work, but not directly affected by pandemic job losses, median earnings grew in the first three quarters of the year. Thirdly, for workers experiencing reduced hours or job losses because of the pandemic, income supports heavily mitigated the earnings shock. Within this group, under-25s benefited most, and females are less negatively impacted than males. Changes to PUP supports in September 2020, linking payments to previous earnings could change this.

[PUP numbers](#) increased sharply in recent weeks, as restrictions were re-introduced. As long as restrictions remain in place, income supports will help avoid large negative income shocks.

The Public Finances

Overview

The public health crisis had a very significant impact on Ireland's budget balance in 2020, with weaker modified domestic demand weighing on revenue growth and the introduction of necessary support measures leading to a sharp rise in expenditure. As a result, we estimate the general government balance to have recorded a deficit of 8.8 per cent of GNI* last year. While this outturn is considerably better than anticipated for much of the year – primarily as direct taxes proved much more resilient than expected – it would nevertheless represent a very significant deterioration from the 0.9 per cent of GNI* surplus run in 2019. While the labour market and modified domestic demand are projected to experience some recovery this year, given the large expenditure increases announced in the Budget, the deficit ratio is expected to remain broadly unchanged at this elevated level in 2021. This should represent its peak, however. Under the assumption that the fiscal measures introduced in response to the crisis are temporary in nature, and with the economic recovery strengthening, the budget balance is projected to improve considerably to 4 per cent of GNI* in 2022. Even with temporary support measures dropping out of the base, government expenditure would remain well above its pre-pandemic level at the end of the projection horizon.

In terms of financing last year's estimated large deficit, the Government had significant resources to hand. As a result, the deterioration in the budget balance is not fully reflected in the gross government debt ratio,

although the latter is still estimated to have increased to around 100 per cent of GNI*. The future path of the debt ratio is expected to broadly follow that of the deficit, recording a further small increase this year before improving in 2022, while remaining at an elevated level. By the end of the projection horizon, it is forecast to remain above 100 per cent. Despite the adverse economic impact of the pandemic, Irish sovereign borrowing rates remain at very low levels - supported by the ECB's pandemic emergency purchase programme - while the medium term maturity profile is broadly favourable, with no bonds maturing in 2021. The National Treasury Management Agency (NTMA) also entered 2021 with large cash balances, increasing sovereign funding flexibility.

As noted in previous Quarterly Bulletins, there is a much higher level of uncertainty surrounding the fiscal outlook than would normally be the case. This reflects uncertainty about the impact of both the pandemic and Brexit on the macro economy this year and over the final cost and duration of the support measures introduced by Government. In the case of the large 'unallocated' expenditure announced in Budget 2021, for example, it is unclear how much of the contingency expenditure will be required and, more broadly, how these resources will be allocated. Potential changes to international tax systems could also affect the public finances over the medium term.

Exchequer Returns

The Exchequer ran a deficit of €12.3bn in 2020, a very substantial deterioration from the preceding year, but not as large as had been anticipated in Budget 2021. The position would have been worse but for factors that have no impact on the general government balance - most notably surplus income payments by the Central Bank of Ireland and NAMA, and a transfer from the National Surplus Reserve Fund - excluding which the Exchequer deficit was just over €16.8bn (see Table 3)²³.

²³ It is more appropriate to focus on the Exchequer balance excluding transactions with no general government impact. This provides a better proxy for the main international budgetary measure and the one that is relevant for both domestic and European fiscal rules.

Table 3: Analytical Exchequer Statement, 2020 (€ millions)

	2020 €m	2019 €m	Annual Change (%)
Exchequer Balance	-12316	647	-2003.1
Transactions with no General Government impact	4493	1693	165.4
Exchequer Balance excluding transactions with no General Government impact	-16810	-1046	-1506.8
of which Revenue	76054	74296	2.4
of which Expenditure	92863	75342	23.3

Source: Department of Finance.

Notes: The figures in the Table exclude transactions with no general government impact, to give a closer approximation to the General Government balance.

On an Exchequer basis, revenue increased by 2.4 per cent in 2020, with developments in the four major tax heads diverging significantly. Indirect taxes were severely affected by the pandemic, with VAT and excise receipts recording sharp declines, reflecting a fall in consumption and a deferment of some payments (see Table 4). Direct taxes, on the other hand, proved to be quite resilient. Income tax receipts were only 1 per cent lower on an annual basis, despite the deterioration in labour market conditions. While this partly reflects strong developments prior to the pandemic, subsequent monthly declines were not as strong as had initially been expected.²⁴ Corporation tax receipts, meanwhile, continued their trend of recent years by surprising strongly on the upside, highlighting once again the strong reliance on this narrow tax base.

Table 4: Developments in Tax Heads, 2020

Year on Year - Cumulative			
	2020 (€m)	2019 (€m)	% Change
Income Tax	22711	22934	-1.0
VAT	12424	15118	-17.8
Excise	5448	5940	-8.3
Corporation Tax	11833	10888	8.7
Other	4749	4434	7.1
Total	57165	59314	-3.6

Source: Department of Finance

²⁴ For a more detailed look at this development see 'Box F: The Resilience of Income Tax in 2020', Central Bank of Ireland Quarterly Bulletin, No 4 2020.

Total gross expenditure, by comparison, was significantly higher than a year earlier (+23.3 per cent or €17.5bn extra), reflecting increased Departmental drawdown in response to the pandemic. The Department of Employment and Social Protection saw spending increase by 53.4 per cent or €5.7bn compared to 2019 on the back of a very sharp increase in transfer payments. Between the Live Register and the Pandemic Unemployment Payment, around 450,000 people were receiving unemployment assistance as the year ended, compared to 165,000 in February. An additional 325,000 workers received a wage subsidy in their most recent pay period in December. Expenditure in the Department of Health, meanwhile, increased by 19.7 per cent, more than double the pace of a year earlier. Gross capital expenditure has remained strong, while the cost of financing interest on the public debt continues to decline.

Fiscal Outlook, 2020 to 2022

The Exchequer data – which represents around 80 per cent of total government revenue and expenditure transactions – reveals the trends expected to have led to a sharp deterioration in the broader General Government Balance in 2020: falling revenue, led by strong declines in indirect taxes, and significantly higher expenditure. This outlook is further supported by monthly data on the general government finances, which shows deficits in both the local government accounts and the Social Insurance Fund in the first eleven months of 2020²⁵.

Reflecting this data, general government revenue is now estimated to have declined by around 3 per cent in 2020, compared to an average growth of 6 per cent in the preceding three years. As noted above there are divergent developments in the direct and indirect tax heads, resulting in a modest decline in overall taxes. This figure incorporates higher than usual tax accruals due to the deferment of some receipts during the pandemic²⁶. Non-tax revenues also contracted, with net social contributions, sales and investment income all negatively affected by the weaker economic environment. With a gradual recovery in modified domestic demand and the labour market forecast for this year, revenue growth is expected to be relatively modest at 2.6 per cent. The economy should enter 2022 with more momentum, however, supporting revenue growth closer to its medium term average.

²⁵ See 'Fiscal Data – Monthly revenues and expenditures of all subsectors of general government for November 2020', Department of Finance.

²⁶ As noted by the Department of Finance in the documentation accompanying Budget 2021, tax accruals are estimated to have increased from €525m in 2019 to €1815m last year (see 'Budget 2021: Economic and Fiscal Outlook', Page 53).

Government expenditure is estimated to have increased by just over 21 per cent in 2020, compared to average growth of 4.5 per cent in the preceding three years. This sharp increase primarily reflected the necessary fiscal support measures that were introduced in response to the crisis. The Government estimate that direct expenditure measures amounted to €16.8bn (7.6 per cent of GNI*) last year, with a further €5bn of indirect supports such as guarantees and loans²⁷. While some of these supports are due to expire this year, Covid-related expenditure is still expected to cost the State around €11.8bn (5.1 per cent of GNI*) in 2021. This figure includes €5.5bn of unallocated resources for the Covid-19 Contingency Reserve and Recovery Fund²⁸. Assuming that these resources are fully utilised, and reflecting the notable increase in permanent expenditure announced in Budget 2021, we expect government spending to increase by 3.3 per cent this year, before contracting by 5.8 per cent in 2022 as the remaining large pandemic related measures and the Recovery Fund drop out of the base. Spending increases are then expected to return close to the economy's long run potential growth rate.

As Table 5 outlines, these revenue and expenditure developments resulted in a deficit of €19.3bn or 8.8 per cent of GNI* (5.3 per cent of GDP) in 2020. While this represents a very significant deterioration from the small surplus in 2019, this outturn is not be as bad as had been expected - even as recently as at the time of the 2021 Budget in October. It would place Ireland in line with the estimated average euro area deficit for the year, and in the middle ground when compared to the region's other economies.²⁹ The deficit ratio is expected to be relatively stable in 2021, increasing very marginally to 8.9 per cent of GNI* (5.3 percent of GDP), before improving significantly as temporary pandemic related spending dissipates, domestic demand recovers and the numbers unemployed decline. The general government balance would still be -4 per cent of GNI* in 2022, with

²⁷ See 'Taking Stock: The Fiscal Response to Covid-19', Department of Finance, November 2020. When revenue measures are also included total fiscal supports increase to €25.2bn in 2020 and €12.6bn in 2021.

²⁸ The breakdown of this 'unallocated' expenditure is €2.1bn for the Covid-19 Contingency Reserve and €3.4bn for the Recovery Fund. While the former is contingent on developments in the pandemic, our projection assumes that the full amount of these resources are utilised in 2021. This approach is consistent with that undertaken by the Department of Finance in Budget 2021 (see Table 11 in 'Budget 2021: Economic and Fiscal Outlook', Department of Finance). For forecasting purposes we have allocated the expenditure evenly between government consumption, government transfers and other spending; this does not represent judgement about how the resources should be utilised, but is rather a purely technical assumption.

²⁹ Source 'Autumn 2020 Economic Forecast', European Commission. The euro area deficit is projected to be 8.8 per cent of GDP in 2020 with improvements to 6.4 and 4.7 per cent projected for 2021 and 2022 respectively. On a national basis Ireland would run the eighth highest deficit ratio amongst the regions' 19 economies in 2020.

government expenditure still well above its pre-pandemic level at the end of the projection horizon.

Table 5: Fiscal outlook under a baseline scenario (per cent of GNI* unless otherwise stated)

	2019	2020e	2021f	2022f
GG Balance (€bn)	1.9	-19.3	-20.5	-9.6
GG Balance (% GNI*)	0.9	-8.8	-8.9	-4.0
GG Balance (% GDP)	0.5	-5.3	-5.3	-2.4
GG Debt (€bn)	204.1	219.2	239.8	249.4
GG Debt (% GNI*)	95.5	99.6	104.1	102.4
GG Debt (% GDP)	57.3	59.8	62.5	61.5

Source: CSO and Central Bank of Ireland Projections

In terms of general government debt, the scenario would see an increase from 95.5 per cent to just under 100 per cent of GNI* last year (or from 57.3 to 59.8 per cent of GDP). Relative to 2019, the nominal increase in debt - €15bn - last year is not as significant as the €22bn deterioration expected in the budget balance as the Government plans to use sizeable existing resources to fund a large part of the deficit. This includes cash reserves held by the NTMA³⁰, National Asset Management Agency surplus payments and resources in the Rainy Day Fund. While the debt ratio is projected to record another increase in 2021, debt dynamics should be more favourable in subsequent years. Strong economic growth and low interest rates are expected to offset the negative impact of primary deficits resulting in a gradual improvement in the ratio over the medium term. This is evident from Box E, which extends out our debt projection to 2026. The Box also tests some of the key assumptions used in this extension to assess how robust debt dynamics are to changes in these key variables.

Funding and Other Developments

The NTMA entered December with significant cash balances of just under €25bn. This followed bond issuance of €2.75bn in the fourth quarter, bringing total funding activity for the year to €24bn, the upper bound of the Agency's target range for 2020. The cost of Irish sovereign borrowing remains very low, supported by the ECB's pandemic emergency purchase program. This was highlighted by the NTMA's first issuance of 2021, when around one-third of the planned bond issuance for the year (€16bn to €20bn) was raised at a negative yield³¹. The NTMA took advantage of

³⁰ We assume a €4bn rundown in cash balances this year, consistent with the amount outlined in Budget 2021.

³¹ On January 5th the NTMA raised €5.5bn through the syndicated sale of a new 10 year benchmark Treasury Bond at a negative yield, -0.257 per cent.

favourable market conditions in recent years to improve Ireland's maturity profile by extending out borrowing and replacing expensive loans with cheaper ones increasing flexibility in meeting borrowing requirements in the coming years. Notably there are no long term government bonds now set to mature until 2022.³²

Box E: How Robust are Debt Dynamics over the Medium Term?

By *Rónán Hickey & David Horan*

Ireland's Debt Profile

In nominal terms, and expressed as a percentage of GNI*, Ireland entered the pandemic with elevated Government debt. Nominal debt stood at just over €204bn in 2019, four times higher than its level prior to the financial crisis. This is set to grow significantly over the medium term, as the government uses borrowing to finance most of the widening gap between spending and revenue. Debt to GNI* - the most appropriate ratio for the Irish economy - was still 95.5 per cent in 2019 (Figure 1). While this represented a significant decline from its post financial crisis peak of 166.1 per cent in 2012, it remained amongst the highest ratios in the Euro Area³³.

Favourable debt dynamics played an important role in reducing Ireland's debt ratio since 2013 (Figure 2)³⁴. The interest growth differential (IGD) and the deficit-debt adjustment (DDA) drove most of the improvements in the debt ratio over the period 2013-2016, while the primary balance played a more significant role in later years as the budget balance was brought under control. Conefrey et al. (2019) have shown that developments in Ireland's IGD and DDA in the years following the

³² Around €500m of UK bilateral loans are due to be repaid in 2021 following a payment of €2bn this year.

³³ European Commission (2020) [European Economic Forecast, Autumn 2020](#).

³⁴ Public debt dynamics are driven by developments in three key variables:

- (i) The primary balance, which is the headline government balance excluding interest payments.
- (ii) The interest growth differential, which reflects the difference between the nominal interest rate paid on government borrowing and the nominal GNI* growth rate,
- (iii) The deficit debt adjustment, which incorporates factors that affect debt but are not included in the budget balance - such as the rundown of cash balances or the divestment of banking assets.

financial crisis were exceptional when compared to other Euro Area countries, suggesting that these factors may not continue indefinitely³⁵.

In the absence of these exceptional debt dynamics, while Ireland’s debt ratio is still expected to decline in the years ahead, this is projected to occur at a much slower pace. In this Box, we extend the debt projections presented earlier in the Chapter out to 2026 by incorporating a number of macroeconomic and fiscal assumptions. This enables us to undertake a longer, medium term assessment of Irish debt dynamics which, alongside factors such as debt structure, funding costs and contingent liabilities, are an important consideration in assessing sustainability. As Figure 1 shows the debt ratio is projected to peak at 104 per cent this year, before starting a gradual decline and is still above 90 per cent of GNI* in 2026³⁶.

Fig 1: General Government Debt Profile

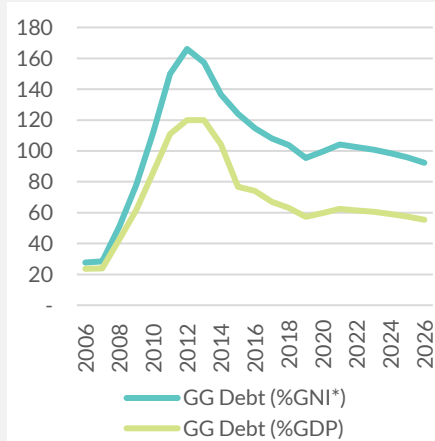
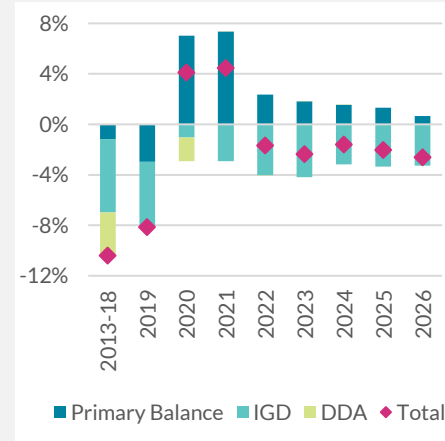


Fig 2: Decomposition of Changes in Irish Debt



Source: CSO and Central Bank of Ireland Calculations.
 Note: 2013-18 reflects the average change in the various components over the period.

Borrowing Costs

Debt-service costs have fallen significantly in recent years, as seen by the notable drop in effective interest rates (Figure 3)³⁷. At the height of the last crisis, the effective interest rate peaked at just over 5 per cent, however this fell below 2 per cent last year. The NTMA took advantage of favourable market conditions in recent years to improve Ireland’s maturity profile by extending out borrowing and replacing expensive loans with cheaper ones. Looking at other metrics of debt-servicing costs in Ireland, interest payments as a percentage of total tax revenue peaked

³⁵ Conefrey, T., Hickey, R. and Walsh, G. ‘[Debt and Uncertainty: Managing risks to the public finances](#)’, Central Bank Economic Letter No. 11 2019.

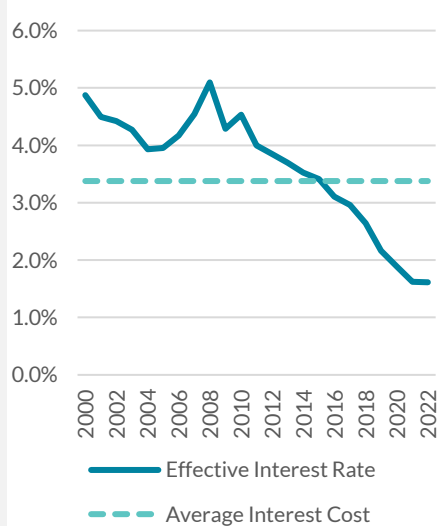
³⁶ For this analysis, we assume that the DDA makes a neutral contribution from 2022 onwards, while GNI* returns to its potential rate of growth beyond the projection horizon. As such, there is some positive (upside) risk to our baseline scenario as outlined above and in the DSA.

³⁷ Effective interest rate = interest payment (t) / stock of national debt (t - 1).

at 12 per cent in 2013 before declining below 5 per cent in 2019. Despite the significant rise in Government debt over the projection horizon, both the effective interest rate and the debt to tax revenue ratio would remain stable in the absence of additional shocks to the economy.

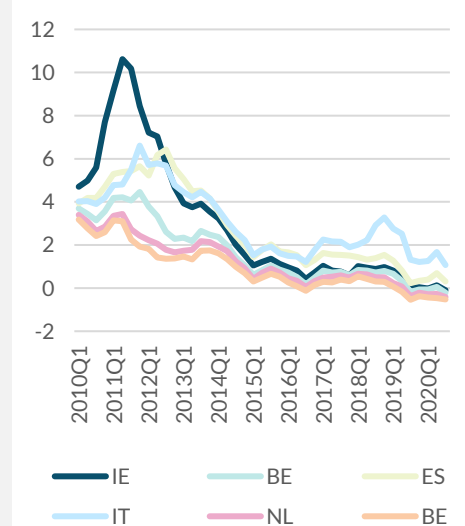
The cost of Irish sovereign borrowing has decreased substantially in recent years, supported most recently by the ECB's pandemic emergency purchase program (Figure 4). For example, in their first bond auction of 2021, the NTMA raised almost €5.5 billion with the sale of a ten-year Irish bond at an interest rate of -0.26 per cent. Whilst this currently allows governments across the Euro Area to borrow cheaply, should inflation pressures emerge, interest rates could rise in the years ahead. For this reason, it is useful to test the assumptions contained in our debt projections by applying adverse shocks to the baseline scenario.

Fig 3: Effective Interest Rate on Irish Government Borrowing



Source: CSO and Central Bank of Ireland Calculations

Fig 4: Sovereign Bond Yields (Ten Year Bonds)



Source: Eurostat

Shocks to the Medium Term Outlook

Debt projections over the medium term are inherently sensitive to the macroeconomic and fiscal assumptions that underpin them. This is particularly the case when the improvement in the debt ratio is expected to be relatively gradual, as the downward momentum is more vulnerable to changes in interest rates, economic growth rates and the budget balance. As a result, it is useful to test our key assumptions by incorporating a range of shocks to assess how debt dynamics evolve in less favourable circumstances. The shocks we apply are:

Standard interest rate shock, which assumes interest rates on new sovereign borrowing increase by 200 basis points from 2023 onwards.

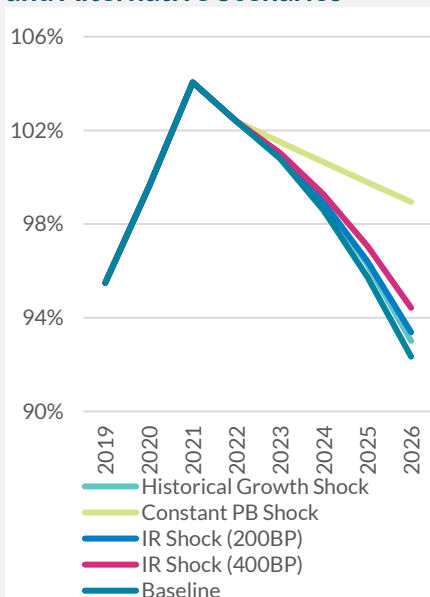
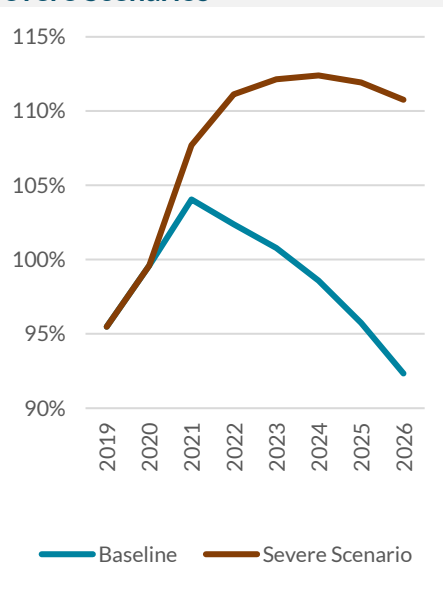
Severe interest rate shock, which assumes interest rates on new sovereign borrowing increase by 400 basis points from 2023 onwards.

Constant primary balance shock, where there is no change in the primary balance post 2022.

Historical growth shock, where the nominal growth rate in output (GNI*) reverts to its long run (10-year) average post 2022.

The interest rate shocks begin in 2023 to account for the current favourable funding environment. This is a purely technical assumption for the purposes of the analysis and should not be seen as a prediction of future rate movement or policy change. Rather it allows us to see what could happen if funding conditions were to deteriorate in the future. Similarly, the constant primary balance shock does not pre-empt any future decisions on budgetary policy; deficit reduction could occur at a faster than expected pace as well as slower. There is considerable uncertainty over both the economic and budgetary outlook at the current juncture however, highlighted by the Government limiting their projections to just 2020 and 2021 in Budget 2021.

Under each of the shock scenarios, the debt ratio is expected to remain on a downward trajectory over the forecast horizon (Figure 5). A constant primary balance beyond 2022 has the most adverse effect, with the higher primary deficit resulting in a debt ratio 7 percentage points higher than the baseline scenario in 2026. This is not sufficient to offset the favourable developments in the interest growth differential, however, and the debt ratio remains on a downward path. Similarly, while a return to nominal historical growth or an increase to funding costs would elevate the debt ratio beyond 2022 (particularly in the event of a severe interest rate shock scenario), the trajectory of the debt ratio remains consistent with sustainability in all three scenarios.

Fig 5: Debt to GNI* in Baseline and Alternative Scenarios**Fig 6: Debt to GNI* in Baseline and Severe Scenarios**

Source: CSO and Central Bank of Ireland Calculations.

Although the adverse scenarios suggest that debt dynamics are relatively robust to shocks in our assumptions, there are three important caveats to note. The first of these is, while we assess the various scenarios in isolation, the shocks we have outlined could occur in some combination, resulting in a less favourable outcome. For example, when we combine the primary balance shock with the severe interest rate shock, the debt ratio is increasing at the end of the projection horizon. The second is the considerable level of uncertainty that currently surrounds both the macroeconomic and fiscal outlook. Incorporating the severe macroeconomic scenario outlined in Box B would see the debt ratio peak at 112 per cent in 2024, and remain elevated over the projection horizon (Figure 6). While the debt ratio begins to decline at a modest rate in the final two years, it would be around 18 percentage points above our baseline at the end of the projection horizon. Finally, it is important to note that under all scenarios – including the baseline – the debt ratio remains at an elevated level throughout. This leaves the economy more vulnerable to other risks that could occur over the medium to longer term. As highlighted by the Irish Fiscal Advisory Council³⁸, an ageing population will have major implications for public spending, while overreliance on corporation tax receipts have been well documented. In addition, despite a Brexit deal being agreed, the new trading relationship

³⁸ Irish Fiscal Advisory Council (2020) [Long-term Sustainability Report, Fiscal challenges and risks 2025-2050](#).

between EU and the UK will have negative consequences for the Irish economy (see Box C).

Box F: Household and Business Financing Developments in the Irish Economy

By Statistics Division

COVID-19 represents an unprecedented shock to the Irish and global economy. The virus and the containment measures taken in response to it have had a significant impact on the financial activities of Irish households and non-financial corporations (NFCs). This Box provides an update on the development of Irish households' and firms' financing activities at an aggregate level throughout the pandemic period.

The initial months of the pandemic saw sharp declines in consumer spending, and in household and NFC lending. While spending and lending started to recover during the summer months as the restrictions were eased, the resurgence in COVID-19 cases and reintroduction of restrictions in late-October, again posed challenges for households, NFCs and banks. At the same time, deposits from households and NFCs significantly increased as the pandemic heavily curtailed consumption, and both government supports and payment breaks have helped ease financial pressure.

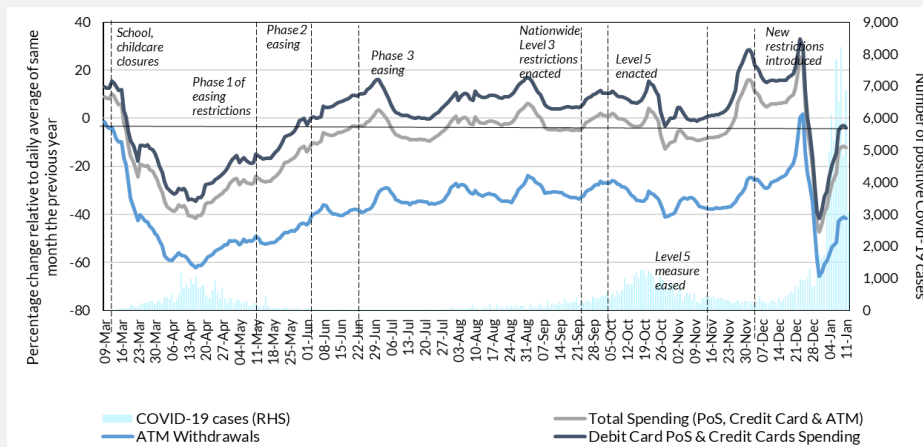
Households

The COVID-19 pandemic has had a large impact on Irish household spending, as daily card payments data demonstrates (Figure 1). During the initial restrictions introduced in March and April, total spending, which includes card spending and ATM withdrawals, decreased sharply. Over the summer months, following the easing of restrictions, spending recovered significantly to levels close to 2019. Given the impact of COVID-19 on spending behaviour, ATM withdrawals remained well below normal levels, with consumers demonstrating a strong preference for card over cash.

Following the rise in COVID-19 infections and the introduction of Level 5 restrictions in late-October, spending again declined, but not to the same extent as in mid-March. Spending increased as Level 5 measures were eased before Christmas, which combined with positive news on vaccines as well as strong economic and employment data, likely reflected an

increase in consumer sentiment³⁹. Similar to the initial restrictions earlier in the year, card spending increased substantially in the days prior to the reintroduction of strict restrictions from Christmas Eve, with a fall in card spending observed in the following days, at an even stronger pace than in mid-March. The extent of the decline on this occasion was likely exacerbated by the restrictions coinciding with the holiday period, as the subsequent recovery in the first weeks of January indicates.

Figure 1: Change in card spending and cash withdrawals compared to the daily average in the same month the previous year



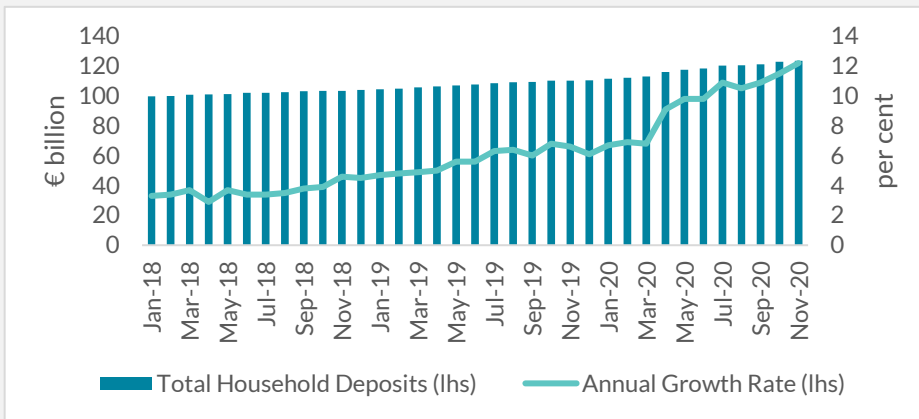
Source: Central Bank of Ireland

Household deposits have seen a significant increase since the start of the pandemic, with outstanding amounts increasing by €10.6 billion from March to end-November, to stand at €123.6 billion (Figure 2). This growth likely reflects an increase in forced savings due to heavily curtailed consumption opportunities, while income support and payment breaks mitigated income shocks to some extent. There may also have been an increase in precautionary savings, driven by expectations of future unemployment and economic uncertainty⁴⁰.

³⁹ See: <https://www.kbc.ie/blog/consumer-sentiment-surveys/sentiment-survey-suggests-irish-consumers-still-ca>

⁴⁰ For more information on savings and consumer spending see: <https://www.centralbank.ie/docs/default-source/publications/economic-letters/the-impact-of-covid-19-on-consumer-spending.pdf?sfvrsn=7>

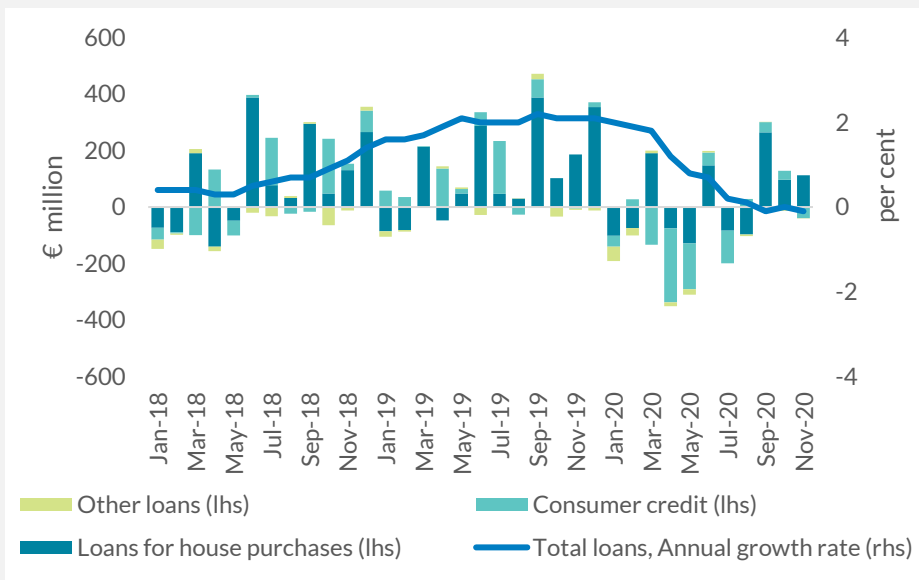
Figure 2: Household Deposits Outstanding Amounts and Annual Rate of Change



Source: Central Bank of Ireland

The growth in household debt observed in recent years stalled in 2020. Since August, the annual growth rate has fluctuated between plus and minus 0.1 per cent (Figure 3), reflecting subdued levels of both new lending and repayments during the pandemic. In monthly terms, net lending saw moderate increases since September, mainly driven by loans for house purchases.

Figure 3: Monthly Net Flow of Loans to Households by Purpose of Loan, and Annual Growth Rate



Source: Central Bank of Ireland

New mortgage lending dropped substantially in the initial phase of the pandemic, before recovering in the second half of the year. In September, new mortgage agreements were back on par with March 2020, but 13.8 per cent below 2019 levels. By end-November, mortgage agreements had further increased, rising by 22.3 per cent from September’s level, and were marginally higher than in November 2019. Forward looking

indicators also point to a solid recovery in mortgage market activity, with approvals 24.3 per cent higher on an annual basis in November⁴¹. The higher approval numbers may be inflated by re-approvals of applications that expired during the earlier lockdown-periods in 2020. Banks are also reporting an increase in demand and this is reflective of a less adverse impact of the COVID-19 shock on the demand for housing than was originally expected at the onset of the pandemic⁴².

In contrast, new agreements for consumer credit and other household lending, which had started to recover over the summer months, ultimately declined over the second half of the year. At end-November, there was a 34.6 per cent year-on-year reduction in new consumer credit lending agreements, compared with minus 14.2 per cent at end-June. At an aggregate level, Irish households did not increase their use of short-term credit such as overdrafts and credit cards during the pandemic. For consumer credit, repayments exceeded new lending by €567 million over the 12 months to end-November, representing an annual growth rate of minus 4.4 per cent in outstanding consumer debt, down from plus 4.5 per cent growth a year earlier.

The prevalence of payment breaks has helped to relieve pressure for existing borrowers by providing an opportunity to postpone or substantially reduce their repayments at a time of severe financial stress. Lenders have offered a wide range of loan payment breaks since late March, typically granted on a three-month basis, with the option to extend for a further three months⁴³. Since their peak of 11.1 per cent for mortgages and 6.5 per cent for consumer loans, the ratio of payment breaks⁴⁴ has already halved in September and continuously fallen since, with the decline partly due to the expired payment breaks⁴⁵. Nevertheless, payment breaks continue to provide necessary relief for many households.

⁴¹ Banking and Payment Federation Ireland, <https://bpfi.ie/publications/bpfi-mortgage-approvals-report-november-2020/>

⁴² See <https://www.centralbank.ie/docs/default-source/publications/financial-stability-review/financial-stability/financial-stability-review-2020-ii.pdf?sfvrsn=9>

⁴³ For more on payment breaks see:

<https://www.centralbank.ie/statistics/statistical-publications/behind-the-data/covid-19-payment-breaks-who-continues-to-avail-of-them> and [https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-6-which-firms-took-covid-19-payment-breaks-\(duignan-and-mcgeever\).pdf?sfvrsn=6](https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-6-which-firms-took-covid-19-payment-breaks-(duignan-and-mcgeever).pdf?sfvrsn=6)

⁴⁴ Calculated as the outstanding value of accounts with active breaks as a proportion of the total outstanding loans. See:

<https://www.centralbank.ie/statistics/statistical-publications/behind-the-data/covid-19-payment-breaks-who-continues-to-avail-of-them>

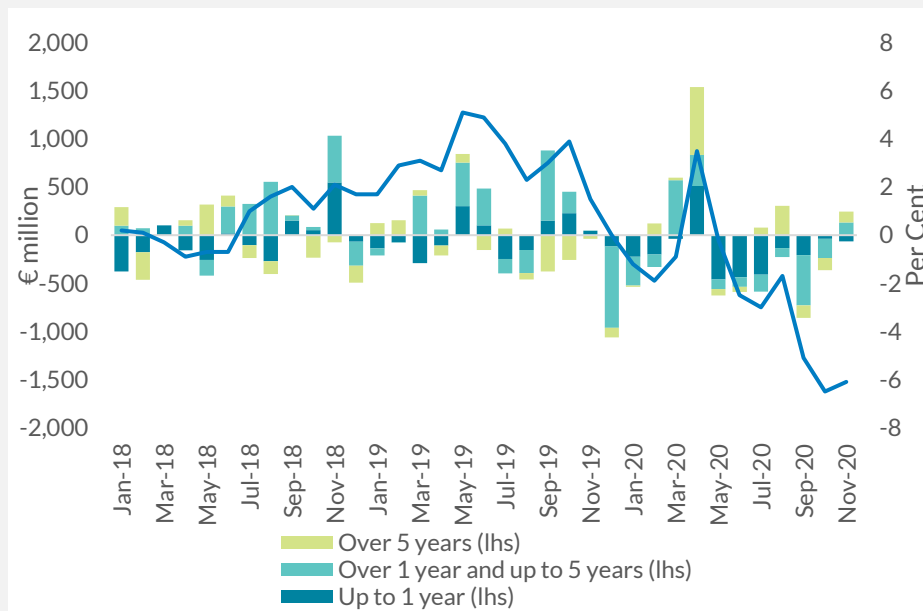
⁴⁵ See: <https://www.centralbank.ie/docs/default-source/publications/financial-stability-review/financial-stability/financial-stability-review-2020-ii.pdf?sfvrsn=9>

Business

Overall, lending to non-financial corporations (NFCs) contracted during 2020. From January to November, repayments exceeded new drawdowns by €1.3 billion. An initial spike in net lending to NFCs at the onset of the pandemic was followed by three months of negative net flows (Figure 4). The modest increase in net lending in August was driven by the loans with a maturity over 5 years maturity, while the following two months recorded decreasing net lending in all maturity categories. In October, total NFC lending recorded the most negative annual growth rate since November 2015, at minus 6.5 per cent.

The uptick in November may reflect a tentative increase in demand for loans from enterprises that the banks had expected for the fourth quarter according to the October Bank Lending Survey. In addition, indicators such as firm credit enquiries on the Central Credit Register point to a recovery in credit applications. The introduction of the Credit Guarantee Scheme and other support schemes should support the provision of credit at favourable rates to firms, although some firms may be reluctant to borrow given the highly uncertain economic outlook⁴⁶.

Figure 4: Monthly Net Flow of Loans to NFCs by Maturity, and Annual Growth Rate

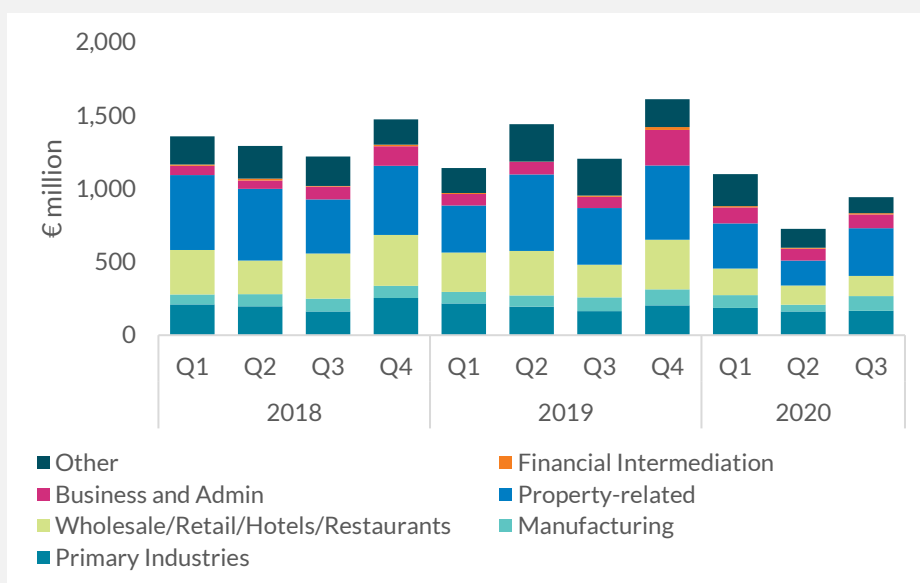


Source: Central Bank of Ireland

Gross new lending to SMEs decreased significantly during the year. In Q3 2020, total gross new lending to SMEs increased on a quarterly basis, albeit was down by 21.7 per cent when compared with the same period the previous year (Figure 5). At sector level, real estate activities, and the wholesale, retail and hotels and restaurants sectors were particularly impacted. During the third quarter, gross new lending to these sectors

moderately recovered from the substantial drop seen in Q2. However, gross new lending was still 38.6 per cent and 16.0 per cent below the Q3 2019 levels for the wholesale, retail, hotels and restaurant sectors, and for the property-related sectors, respectively. Repayments by all SMEs in Q3 2020 recorded the lowest quarterly level of repayments since Q3 2013. Similar to the situation with households, the payment break ratio was at its peak in June, at 22.9 per cent for SMEs, and since then continuously fell, albeit at a slower pace than for households⁴⁷. However, by end-October almost all payment breaks were expired, with a payment break ratio of 3.3 per cent for all outstanding loan balances, including SME, household and corporate loans⁴⁸.

Figure 5: Gross New Lending to SMEs (quarterly basis)



Source: Central Bank of Ireland

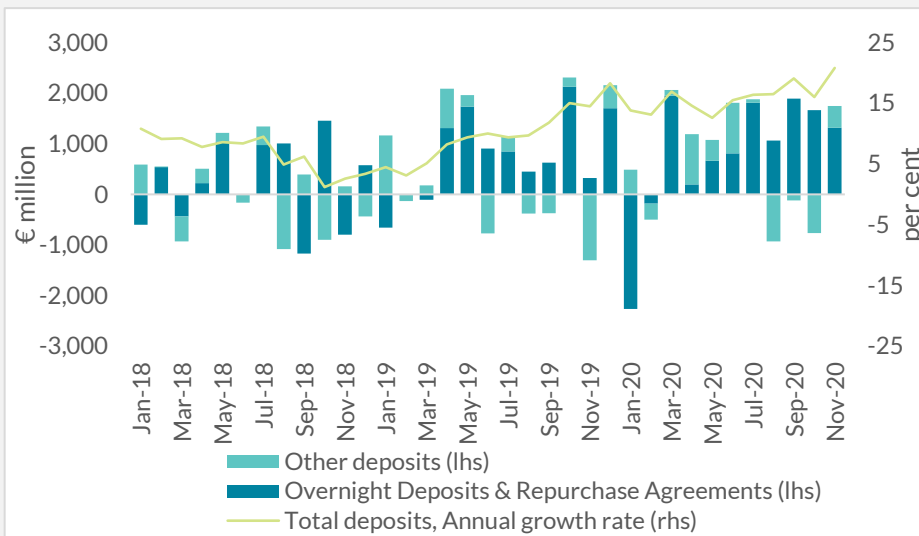
The general upward trend in NFC deposits continued during the pandemic, despite the low or negative deposit interest rates (Figure 6). Since April, deposits from NFCs recorded a net inflow of €10.5 billion. At the same time, the strong annual growth was mainly attributable to overnight deposits and repurchase agreements, reflecting the firms' strong preference for liquidity in light of the high level of uncertainty about the future of the pandemic and about the trading arrangements between the UK and the EU at the end of the Brexit transition period.

⁴⁶ See: [https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-8-sme-finances-the-pandemic-and-the-design-of-enterprise-support-policies-\(lambert-mccann-mcquinn-myers-and-yao\).pdf?sfvrsn=6](https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-8-sme-finances-the-pandemic-and-the-design-of-enterprise-support-policies-(lambert-mccann-mcquinn-myers-and-yao).pdf?sfvrsn=6)

⁴⁷ See: <https://www.centralbank.ie/statistics/statistical-publications/behind-the-data/covid-19-payment-breaks-who-continues-to-avail-of-them>

⁴⁸ <https://www.centralbank.ie/docs/default-source/publications/financial-stability-review/financial-stability/financial-stability-review-2020-ii.pdf?sfvrsn=9>

Figure 6: NFC Deposits Net Flows by Maturity, and Annual Rate of Change



Source: Central Bank of Ireland

Summary

The economic shock from the initial restrictions related to the COVID-19 pandemic led to a notable change in behaviour from households and firms. Household spending fell as restrictions were introduced and reintroduced during the pandemic, and gradually increased during times when restrictions were lifted. Card spending was strong during much of December, but dropped steeply after Christmas Eve, likely to be due to a combination of the holidays and the reintroduction of strict restrictions. To end-November 2020, the curtailment in household spending coincided with a substantial growth in household deposits at aggregate level. New lending to households declined markedly to end-November, and remains below 2019 levels despite recent monthly gains, particularly in mortgage lending. As with households, NFCs' deposits increased significantly, while NFC lending declined, with the impact of the pandemic varying across sectors and for individual firms given the nature of the restrictions. The most up-to-date data on household and NFC deposits and credit do not cover the latest tightening of restrictions. The impact of this on the financial activities of Irish households and firms is yet uncertain, as it will also depend on the further evolving nature of the pandemic and related restrictions.

Signed Articles

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Whither Cash in Payments?

David Cronin⁴⁹

Abstract

The use of cash (banknotes and coin) in making payments has been in relative decline in Ireland and in other European countries for some time now, as a substitution to card payments by the public has occurred. The adoption of contactless payment technology in recent years and the current pandemic appear to be accentuating the decline of cash as a payment instrument but a demand for cash for this purpose can be expected to remain in place over time. Central banks, in conjunction with payment providers, then will need to continue to supply and distribute banknotes and coin to the public against the backdrop of a falling but likely substantial demand for cash.

⁴⁹ Irish Economic Analysis Division. This article has benefitted considerably from the comments of Central Bank colleagues. The author would like to thank Raquel Dias for discussion on the data used and other issues in this area. The views expressed here are, nevertheless, those of the author and do not necessarily reflect those of the Central Bank of Ireland or the European System of Central Banks.

1. Introduction

The decline of cash in payments has come into focus in recent years and during the current pandemic as the public increases its use of card payments. This article considers some of the issues raised by this development. Initially, it discusses the historical role of cash in payments and its other use as a store of value. An overview of cash and card payment developments in Ireland since the changeover to euro notes and coins in 2002 up to the onset of the pandemic in early 2020 is then considered. Data for five other EU member states and the UK over the same timespan are also included for comparative purposes. Those countries have different levels of cash and card usage to Ireland, which give an indication of the range of preferences for cash across Western Europe. In general, there appears to be a downward trend in the demand for cash in payment data backed up by empirical assessments (and the graphical analysis presented here) that can be largely attributed to a replacement of card payments for cash, although the extent of this substitution varies across individual countries. A review of cash and card usage since last spring suggests that a further move away from cash to cards occurred since the onset of the pandemic.

Looking ahead, the introduction of contactless payments as a substitute for cash in small-value payments in recent years and the network effects generated by the adoption of this technology and card payments more generally would suggest that cash's place in payments will continue to decline over time. A demand for cash in payments, however, can be expected to persist. Not all members of the public will want to use electronic means of payment owing to their habits, an appreciation of the anonymity and privacy that cash confers on its users, and it not being subject to cyber-attacks and such like (summed up in the phrase "cash does not crash"). Cash is also preferred for budgeting purposes among many households and surveys show that certain demographics would find it difficult to manage without it. The heterogeneity of payment preferences across the euro area and the common currency also draws attention to the need for cash to be accepted in payment across member states. The Eurosystem's cash strategy indicates that it aims to safeguard the future of cash, *inter alia*, by ensuring the availability of euro cash, supporting access to it, and making sure cash is accepted everywhere.⁵⁰

This article then considers how the use of cash in payments has changed over time and may develop in the future. It does so by assessing relevant data and studies on cash usage. Since payment cards (debit cards, credit

⁵⁰ For more on the Eurosystem cash strategy:

https://www.ecb.europa.eu/euro/cash_strategy/html/index.en.html

cards) are the closest substitute for cash in many transaction types and will influence future cash usage, developments in card payments are also considered, and, in particular, how they have been substituting for cash. The structure of the article is as follows: in the next section, the role that cash plays in economic activity and society more generally is discussed. Sections 3 and 4 discuss, in turn, developments in cash and card payments since the early 2000s up to 2019. Section 5 considers changes in retail payment practices since the onset of the pandemic and how it has been affecting cash usage in consumer payments. Section 6 draws together the empirical evidence and other contributions to assess whether a demand for cash in payments can be expected to persist over time. Section 7 concludes.

2. The role of cash in economic activity

The economics literature typically outlines three functions of cash, and money more generally. Those are that it provides the economy's medium of account (units of it define prices), acts as the medium of exchange (it intermediates the exchange of goods and services), and is a store of value for its holders to hold their wealth in.⁵¹ The latter two functions sustain the demand for money (and allow it provide the unit of account). The money supply comprises central bank-issued notes and coins, customer deposits at commercial banks, and bank settlement balances held at the central bank, with the first two of those held by the non-bank public.

Cash takes the form of physical notes and coin and is the oldest general means of payment.^{52 53} Bank deposits have been transferrable by an expanding range of methods over time. Some of the older instruments include cheques, bank giro/draft, credit transfers, direct debits and credit cards. More recently, debit cards have become popular payment instruments.⁵⁴ The introduction and adoption of each of those instruments would have had an impact on cash usage and on other cashless instruments. Demand for some payment forms, most notably cheques, has declined in recent decades with the introduction of new non-paper payment

⁵¹ Many overviews of money also state that it provides a standard of deferred payment, i.e. that it allows its holder to use the medium at a future date in the purchase of goods and services.

⁵² See Cronin and McGuinness (2010, p. 58) for a synopsis of the historical development of money.

⁵³ Cash is issued by central banks in modern payment systems and is a source of income to them. A decline in the amount of cash outstanding would diminish this income source, although this is not considered further here.

⁵⁴ The payment statistics section on the European Central Bank (ECB) website provides an in-depth description of payment instruments used in EU member states (see: <https://sdw.ecb.europa.eu/reports.do?node=1000004051>).

methods.⁵⁵ Some instruments, such as direct debits, have substituted for cash in, for example, the payment of utility bills but are often been ill-suited to smaller-value payments made by cash. Credit cards and, more significantly, debit cards have become a substitute for cash in such payments over the last twenty years or so. While card payments have long been used at a physical point of sale by the card holder inputting a personal identification number (PIN), the latter half of the 2010s has accentuated the capability of payment cards through the introduction of contactless payment. The growth of e-commerce also sees cards being used to buy goods remotely that would previously have been bought over the counter with cash.

Besides its medium of exchange function, cash also meets the public's demand to hold its wealth in a liquid, ready-to-use format - its store of value feature - and that must be borne in mind when attempting to understand the role it plays in payments. Cash has a fixed nominal value, a quality that is attractive when inflation rates and nominal interest rates are low or negative and when there is an elevated level of economic uncertainty. It is also legal tender and, as it is issued by a central bank, bears little or no settlement risk (there is a risk that the bank note is fraudulently copied).⁵⁶ These attributes, along with the anonymity of cash transfers and the ease with which notes and coin can be exchanged, are also of attraction in a medium of exchange.

The anonymity and privacy that cash confers on its holder also makes it difficult to understand the extent to which it is held for use as a medium of exchange or as a store of value. Lalouette and Esselink (2018) note that the value of euro banknotes in circulation relative to GDP has been rising over time, indicating that more than increased transactions demand is affecting its growth.⁵⁷ They argue that most euro banknotes in circulation are used as a store of value in the euro area or are held abroad. They estimate that about one-quarter of notes in circulation (by value) in 2017 were being used for transaction purposes. Bech *et al.* (2018) are of the view that its store of value property is supporting cash demand.⁵⁸

⁵⁵ The number of cheques written in Ireland is in steep decline. ECB SDW data indicate that cheques sent have declined from 31.6 per capita in 2006 to 6.5 in 2019.

⁵⁶ Bank note fraud is very low among euro banknotes. ECB data indicate that some 24 counterfeit banknotes were detected per one million genuine banknotes in 2019. See:

<https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200124~242b62d123.en.html>

⁵⁷ At end-November 2020, euro currency in circulation amounted to €1,350 billion.

⁵⁸ Another use of cash is for making payments in the underground economy. Recent studies by Jobst and Stix (2017), Seitz *et al.* (2018) and Deutsche

A related issue here is that there will also be a foreign demand for cash, i.e. from outside the jurisdiction in which the currency is issued, for both store of value and medium of exchange purposes. This demand is particularly strong for the US dollar and the euro. A longstanding view was that some 70 per cent of US dollar currency by value was held overseas although more recent estimates suggest less than one half of US cash issue is held abroad (Rogoff, 2016). Deutsche Bundesbank (2018a) states that there has been an increase in foreign demand for and domestic hoarding of euro banknotes issued in Germany since 2010.

Cash providing medium of exchange and store of value functions to its holder then presents a practical difficulty in ascertaining what proportion of the stock of currency is held for payment purposes. In the euro area, there is also the difficulty that it is not possible to assess the outstanding cash stock at a member state level. One means of addressing this issue is to assume that large denomination notes are more likely to be held for store of value purposes, while smaller denomination notes and coin are mainly demanded for transactions. The unweighted average value of cash withdrawals at automated teller machines (ATM s) in 2019 across the seven countries surveyed below is €142 and thus it seems reasonable to assume that such withdrawals are for use in exchange.⁵⁹ Consequently, ATM withdrawals are used here as an indirect means of assessing changes in cash usage in payments over time, supplementing reference to specific surveys and empirical studies.⁶⁰ Card payments are relatively easy to quantify given the records trail that they leave.

In the following three sections, the use of cash and cards in payments since the introduction of the euro cash in 2002 up to and including the current pandemic are considered. A survey of developments over the seventeen-year period from 2002 to 2019 indicates a substitution of cards for cash in

Bundesbank (2019), however, do not find this to be a large source of demand for euro cash.

⁵⁹ The average ATM withdrawal amount in Ireland in 2019 was €139. The average over-the-counter withdrawal at banks in 2018 was €541 (source: <https://www.centralbank.ie/statistics/data-and-analysis/payments-services-statistics>, author's calculations).

⁶⁰ ATMs are not the only means of withdrawing cash with over-the-counter (OTC) services also being an important method of acquiring cash at source and the reliance on ATMs and OTC services for cash withdrawal varies across countries. Esselink and Hernandez (2017) indicate that 61 per cent of cash in the euro area is sourced through ATMs. The amount of cash withdrawn from ATMs in 2015 was almost four times that withdrawn over the counter. ATM withdrawals then can be used as an indicator of general patterns of cash use in payments. Post offices are an important means by which cash enters the Irish economy, particularly through social payments. Indecon (2018, p.8) indicates that there was a 24 per cent fall in social welfare benefits dispersed in cash between 2014 and 2017. While this reflected a drop in unemployment numbers, there was also an increase in direct payments to bank accounts.

retail payments occurring in general. In recent years, contactless payment technology is allowing cards to be used in small-value payments - previously largely the preserve of cash - which would appear to be reducing further the prominence of cash in payments. The impact of the current pandemic on the cash-cards dynamic would seem to be adding to the substitution that is occurring.

3. The use of cash in payments since the introduction of euro banknotes and coin

The introduction of euro banknotes and coin in the euro area in 2002 is a suitable juncture from which to identify trends in how cash and its close substitutes, specifically debit and credit cards, are being used by the public in payments. The focus here is on comparing Ireland with a selection of other, mainly euro area countries as data for the euro area as a whole would mean that the heterogeneity of payment preferences at the member state level would be lost. Along with data for Ireland (IE), the figures that follow also contain values for euro area member states Austria (AT), Germany (DE), the Netherlands (NE), and Finland (FI). Sweden (SE) and the United Kingdom (UK) are also considered.

Both Austria and Germany are known as countries with a strong attachment to using cash in payments.⁶¹ Close to 80 per cent of all payment transactions were made by cash in Austria and Germany in 2011 (Bagnall *et al.*, 2016). Finland, the Netherlands and Sweden have embraced electronic payments over the past twenty years or so. Sweden has seen a well-publicised shift in recent years away from cash to electronic payments, including through the use of the mobile-based Swish payment system. A recent Sveriges Riksbank (2020) survey indicates that less than 10 per cent of people in Sweden in 2020 had paid for their last purchase in cash, against 39 per cent in 2010. The UK is another country that has seen a large shift from cash to electronic payments over time and has been the focus of some recent in-depth payment studies, including the Access to Cash report (2019) that is referred to below. The ATM data used here comprise withdrawals made with cards issued by resident payment system

⁶¹ Rusu and Stix (2017) note that the predominant role that cash plays in Austria has not changed in the past 20 years. They suggest that this could be owing to low acceptance of payment cards and consumer preferences. Neither can sociodemographic factors such as age and class explain the preference for cash or cards. In 2016, 82 per cent of all payments were made in cash, while cash accounts for 47 per cent of payments greater than €100.

providers (PSPs) at both resident PSP and non-resident PSP terminals.^{62 63}
64

Figure 1 shows the average number of ATM withdrawals per capita at three-year intervals between 2004 and 2019. These have declined steadily over time in the Netherlands, Finland and Sweden. They have remained relatively unchanged in the other four countries and were high by number in Ireland in 2019, at 31 per capita. ATM withdrawals have long been the preferred facility for accessing cash in Ireland (Cronin and McGuinness, 2010).

Moving from the volume of ATM withdrawals to their value, Figure 2 shows the amount withdrawn as a percentage of personal consumption.⁶⁵ This has declined over time in Ireland, suggesting less of a reliance by consumers on cash in conducting their purchases. Using this metric, Ireland is still relatively reliant on cash by comparison to the other countries. Another way of looking at the value of ATM withdrawals is to express them on a per capita basis. Figure 3 shows that the average amount withdrawn in Ireland is high compared to other countries in the graph.⁶⁶ As with the previous charts, the ATM data point to a broadly unchanged reliance on cash in Austria and Germany over time, while withdrawals in the remaining four countries have fallen over time. Figure 4 shows the average ATM withdrawal amount being relatively unchanging over time for most countries.

⁶² Data on the number of payments cards outstanding, ATMs, and EFTPOS terminals are not displayed here so as to focus on ATM transactions data. Esselink and Hernandez (2017) indicate that card ownership has little explanatory power over general payment behaviour.

⁶³ Data from independent ATM providers are excluded. These have a significant presence in Ireland with BPI (2018) estimating that “through acquisitions or new installations, independent ATM providers have increased their share of ATMs deployed to one quarter of all ATMs in Ireland”.

⁶⁴ Another means of attaining cash is at point of sale through the “cashback” facility that many retail outlets offer their customers. Data for use of that facility are not considered here.

⁶⁵ This denominator is used given the distortions associated with the GDP measure for Ireland in recent years. It is also chosen on the assumption that most cash withdrawals at ATMs are made by consumers.

⁶⁶ All data in Figure 3 are deflated using the country’s HICP deflator (base year: 2015).

Fig 1: Average number of ATM withdrawals per capita | **Fig 2: ATM withdrawals as a percentage of personal consumption**

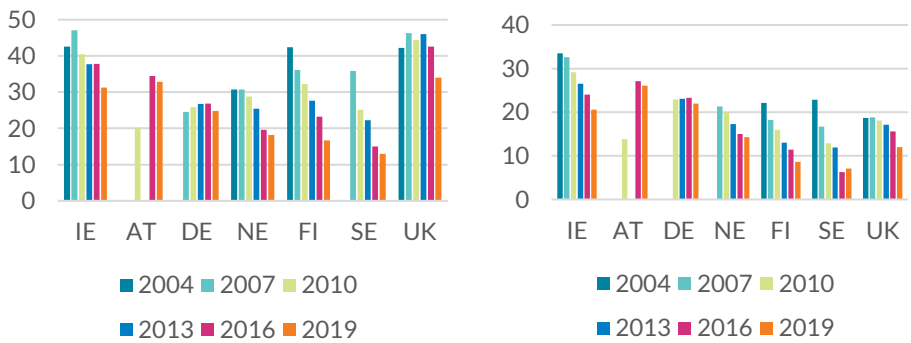
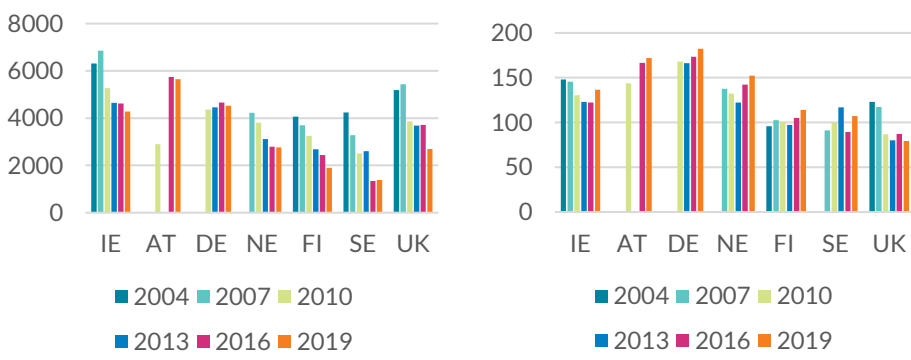


Fig 3: ATM withdrawals per capita - Value (€, real) | **Fig 4: Average ATM withdrawals (€, real)**



Source: ECB SDW, AMECO, Own calculations.

4. The use of cards in payments since the introduction of euro banknotes and coin

Alongside the charts above, card payment data give an illustration of countries’ relative reliance on cash and cards over time. Figure 5 shows the number of card payments per capita per annum increasing over time in all seven countries with the largest rises in payment numbers in the chart occurring between 2016 and 2019, with the exception of Sweden where the increase between 2013 and 2016 was greater.⁶⁷ The average number of card payments in Ireland rose from 160 in 2016 to 262 in 2019. Card usage in Ireland is still lower than the other countries with the exception of Austria and Germany, but higher than the euro area average of 136 payments in 2019. The reason for a pickup over time in card usage in many countries can be explained by consumers’ attitudes to cards, including their safety and acceptability in payments, and costs (Jonker, 2013).

⁶⁷ Card payment data here are those based on payments made by cards issued by resident PSPs.

Fig 5: Average number of card payments capita

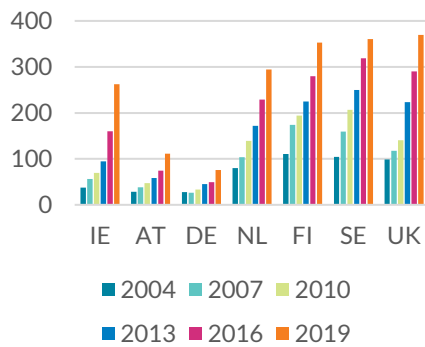
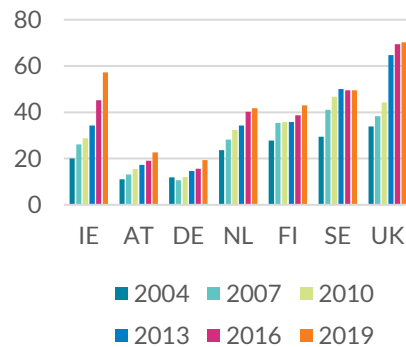


Fig 6: Card payments (as a percentage of Personal Consumption)



Source: ECB SDW, AMECO, Own calculations.

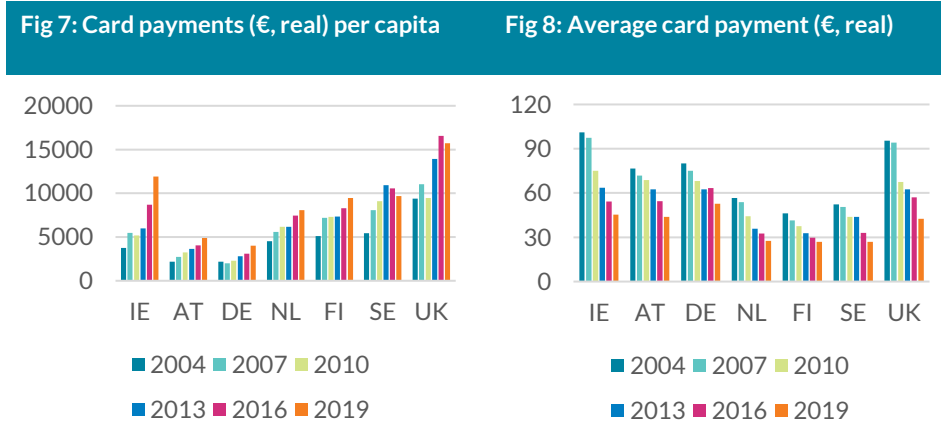
Note: Card payments with cards issued by resident PSPs.

Moving to the variables where the value of payments is used, Figure 6 shows card payments as a percentage of personal consumption rising steadily over time while a similar pattern is evident in Figure 7 where average (real) card payment values per capita are shown. As with Figure 5, there are large rises in these two charts for Ireland in recent years. The UK's entries in these charts are relatively high, reflecting an embracing of card payments that saw the volume of debit card payments come to exceed cash payments in 2017 (Access to Cash, 2019). Figure 8 indicates that average (real) card payments have declined over time. Average payments in 2019 range from a high of €53 in Germany to lows of €27 in the Netherlands, Finland and Sweden.

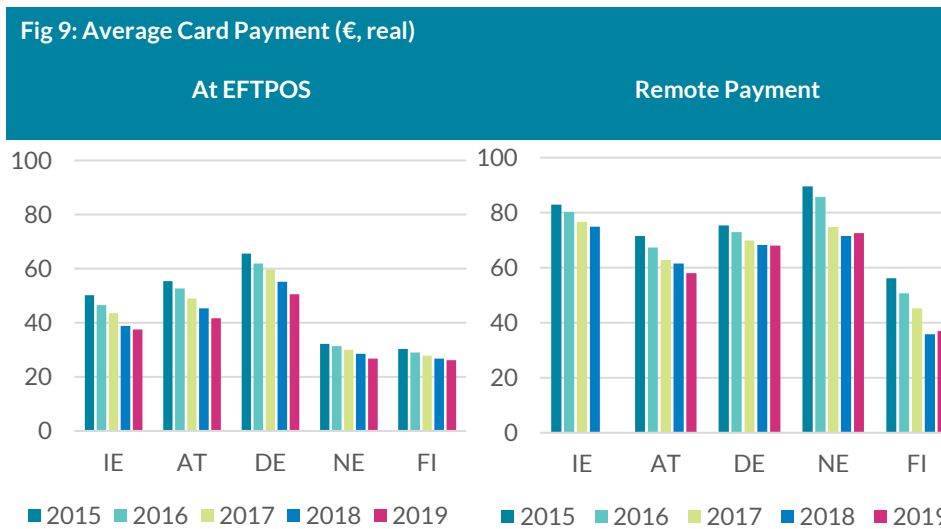
Card payments can take place at a physical terminal (termed electronic transfer at point of sale, or EFTPOS) or remotely. This latter capability facilitates e-commerce, i.e. buying goods on-line. Among the five euro area member states, Figure 9 shows that over the short, recent timespan of 2015 to 2019, average card payments have been declining steadily for both forms of card payments while the average remote payment is higher than that at an EFTPOS.

The data presented here then indicate a rising adoption of electronic payments in the countries covered, with Ireland's take-up of card payments being particularly noticeable in recent years. Indecon (2018) ranks Ireland at tenth among 27 European countries for the combined use of card payments, direct debits and credit transfers and at eighth for card usage. Among the factors that it identifies as being behind the move towards card payment in Ireland are greater acceptance of cards by retailers, increased popularity of contactless functionality, and the availability of non-traditional payment providers. Policy initiatives are also identified as playing a role, including changes in stamp duty and reductions in interchange fees, the introduction of electronic banking in many post

offices and credit unions, and greater accessibility owing to the transposition of the Payment Accounts Directive. A reduction in the proportion of households that are “unbanked” (i.e. do not have a bank account) since the mid-2000s also increases the scope for more electronic payments.



Source: ECB SDW, AMECO, Own calculations.
 Note: Card payments with cards issued by resident PSPs.



Source: ECB SDW, AMECO, author’s calculations.
 Note: Card payments with cards issued by resident PSPs.

Developments in card payments and other electronic retail payments in recent years

Consumers have seen changes to how they can use a card at a physical POS in recent years. This includes the ability to “tap-and-go” whereby a payment can be made by bringing a payment card, or other mobile device, into close contact with a card reader without the input of a PIN, thus reducing transaction times and making the card payment easier. The improved attractiveness of cards in small-value payments has coincided

with a pronounced rise in their use. In the UK, there was a 97 per cent increase in contactless payments in 2017 alone (UK Finance, 2019). Some indication of how contactless card payments are being adopted in Ireland is to be found in commentaries and data provided by Banking and Payments Federation of Ireland (BPFi). BPFi (2017) indicates that 4.2 million debit cards and over one million credit cards in Ireland had a contactless payment feature by end-2017. Contactless payments amounted to €2.86 billion by value in 2020Q3 with 182 million such payments occurring in that quarter (BPFi, 2020).

Several policy approaches, including at a pan-European level, have arisen in recent years that can influence retail payment developments and, in particular, encourage electronic payments. Among those is the Single Euro Payments Area (SEPA), which promotes the harmonisation of payment standards in the European Union and in some non-EU countries, in particular for direct debits and credit transfers. It has done so by removing technical, legal and market barriers between countries. Its benefits include improved convenience and cost effectiveness in making payments across Europe (Central Bank of Ireland, 2020). The Payment Services Directive (PSD2) provides for the entry of new players into payment services. There is also a move towards allowing instant retail payments to be made where payments are processed in real time and funds are made available for use to recipients immediately. The Eurosystem launched Target Instant Payment Settlement (TIPS) in November 2018 to allow payment service providers to offer fund transfers to their customers in real time and on an ongoing basis with settlement occurring in central bank money.⁶⁸ The SEPA Instant Credit Transfer (SCT Inst), which provides near-instantaneous pan-European credit transfers, is in operation in a number of European countries.⁶⁹ Interventions such as the Interchange Fees Regulation can influence payment behaviour by, in this case, introducing a cap on certain interchange fees on payment cards.

There are also policy initiatives in Ireland to promote the adoption of electronic payments such as support to small-and-medium enterprises (SMEs) to develop on-line trading (e-tailing) strategies (Indecon, 2018). The National Payment Plan, launched in 2013, recommended a significant increase in the use of secure and efficient electronic payment methods, identification of measures that supported innovative electronic payment methods, and the adoption of SEPA standards.

⁶⁸ See Central Bank of Ireland (2020) for more detail on these policies.

⁶⁹ Pricing policy in relation to ATM and card usage will influence consumer payment choices and the payment services that retailers use or encourage. Any future changes in pricing policy by payment providers to retailers or consumers (by retail banks or ATM providers) could affect usage.

Box: Banknote returns to the Central Bank and cash-based personal consumption expenditure

By David Cronin and Niall McInerney

The Central Bank operates at a critical point in the cash distribution system in Ireland. It supplies the banknotes and coin that are distributed through the banks and other payment services providers to the general public for use in payments. It is also a recipient of cash returns, which can arise when notes and coin have become unfit for use through wear and tear or when there is a surplus of cash among the public.

Understanding what drives the cycle of issues and returns (what might be called the cash cycle) is important for managing the cash distribution system. This is particularly the case when the use of cash in payments is changing substantially, as has been outlined in this paper.

The less cash that is used in the economy the less will be the wear-and-tear of cash, in particular banknotes, that will arise and consequently there will be lower returns of such cash to the central bank, all else being equal.⁷⁰ A measure of the amount of personal consumption expenditure (PCE) paid for by cash captures the extent to which banknotes are used in the economy and it should then have explanatory power over cash returns, with cash returns rising (falling) as cash-based PCE increases (decreases). A measure of cash-based PCE was constructed, on a quarterly basis, for Ireland by deducting spending made by debit cards and personal credit cards and the housing expenditure component of PCE (which it is assumed is not paid for in cash) from total PCE. This quarterly, seasonally-adjusted (SA) series is plotted over the period 2002Q1 (when euro banknotes and coin were introduced) to 2019Q4 in Figure A alongside total PCE. Both series increased in the early-to-mid 2000s before declining after mid-2008 as the Irish economy experienced a sharp downturn. Total PCE started to pick up once more in 2013 as economic performance improved but cash-based PCE continued to fall as card-based expenditure increased. The divergence between total PCE and cash-based PCE has grown over time.

In Figure B, total note returns (by number of pieces), on a seasonally-adjusted basis, to the Central Bank are plotted alongside the cash-based PCE series of Figure A. After 2002-3, both series moved broadly in proportion to one another up for a considerable period. In recent years, there has been a sharper downward movement in notes returns to what

⁷⁰ Bauer and Littman (2007).

occurred previously and that is not matched by an accentuated decline in cash consumption. Formal econometric tests indicate a long-run proportional relationship between the two series when a structural break, which is identified as occurring in 2017Q2, is allowed for.

Two factors that may help explain this recent development are structural changes in the cash distribution system and the take-up of contactless payments by the public. On the latter, all major Irish banks had introduced contactless cards by 2017. BPIFI data indicate an almost nine-fold increase in contactless payments between 2016Q1 and 2019Q4, with the total value of such payments rising by a similar magnitude. The lower-value cash payments replaced by contactless payments are likely to require more currency pieces (i.e., a greater number of notes) relative to the expenditure amount involved than the higher-value cash transactions that are substituted by chip-and-pin payments. Consequently, the introduction and adoption of contactless payments may be a factor in the large fall in note returns relative to cash-based personal consumption in recent years.

Fig A: Consumer spending and its cash-based component (€ mn., SA)

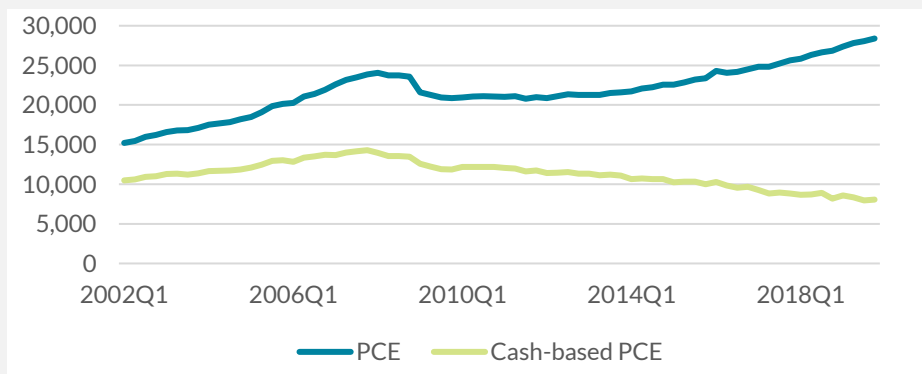
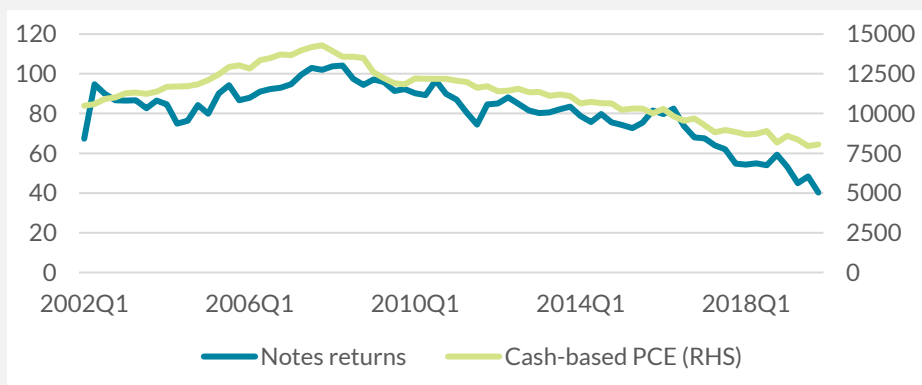


Fig B: Note returns (mn.s of pieces, SA) and cash-based PCE (€ mn., SA)



Source (Fig A & B): Central Bank of Ireland, Central Statistics Office, ECB Statistical Data Warehouse, Own calculations.

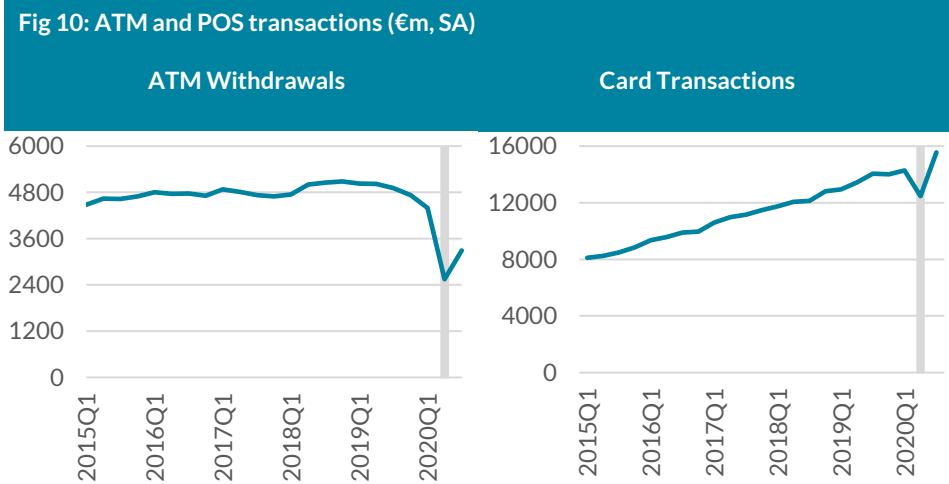
5. Effects of the current pandemic on cash demand

The immediate effect of the Covid-19 pandemic on cash was to see a spike in the demand to hold cash in the euro area. Cash withdrawals in Europe in mid-March were comparable to the week before Christmas (Panetta, 2020). This may not be unexpected as consumers will have large immediate outlays on in-store purchases of essential items when a crisis of this nature arises. They will also have a precautionary demand for cash to hold.

Hopkins and Sherman (2020) report that there was a decline in card spending and ATM withdrawals in Ireland from mid-March up until early-April, with the first set of restrictions having been announced by Government on 12 March and with less opportunity to spend in retail outlets arising thereafter. While fewer ATM withdrawals occurred, the average ATM withdrawal amount increased. ATM transactions values increased in the months after April but remained well below corresponding 2019 months. In contrast, the value of POS transactions by debit cards were much higher than 2019 levels from mid-year, with June to October 2020 transactions some 17 per cent higher compared to the same months in 2019.⁷¹ The value of ATM withdrawals for the June to October 2020 period was one third lower than a year previously.

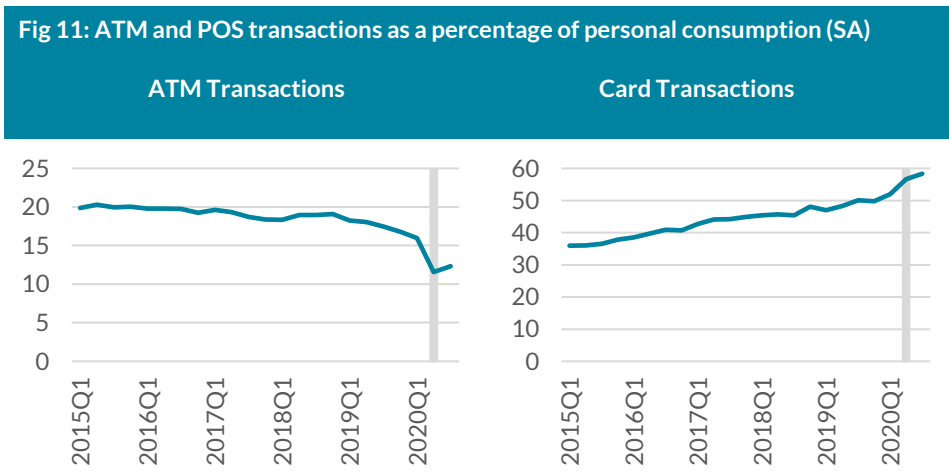
The two panels of Figure 10 illustrate the effects of the pandemic on the (seasonally-adjusted) amounts withdrawn at ATMs and expended at POS, respectively, on a quarterly basis between 2015Q1 and 2020Q3. The left hand panel shows that ATM withdrawals had remained relatively steady over time up until 2020. There was then a drop in the amount withdrawn in 2020Q1 and a more substantial reduction in the second quarter. There was some recovery in 2020Q3 but withdrawal amounts remain much lower than previously. Card transactions (the sum of debit card POS transactions and new spending on personal credit cards) also dipped in 2020Q2 but have broadly maintained the trend increase witnessed over recent years.

⁷¹ Some Irish retail banks waived contactless fees at the onset of the public health crisis in the spring.



Source: Central Bank of Ireland, author's calculations.
 Note: Shaded area is 2020Q2.

In Figure 11, these transaction values are shown relative to personal consumption up to 2020Q3. While there had been a slow steady decline in ATM withdrawals as a proportion of consumption up to end-2018, there was a more noticeable decline during 2019. This was added to in the second quarter of 2020, with some recovery as the economy opened up more extensively in the third quarter but with withdrawals still at much lower levels than in previous years. In contrast, POS transactions as a percentage of personal consumption ratcheted up sharply in the second quarter during this period of lockdown and were marginally higher again in 2020Q3. Inter alia, these developments likely reflect changes in the pattern of spending within the consumption basket and where consumers can and cannot buy goods and services during the pandemic, changes which it cannot be adjudged at this time as to whether they will be permanent or temporary in nature.⁷²



⁷² See Byrne *et al.* (2020) for a discussion of how Covid-19 has affected consumption developments in Ireland.

Source: CSO, Central Bank of Ireland, author's calculations.

Note: Shaded bar indicates 2020Q2

Among card payments, those made by contactless means rose sharply during 2020. For example, as the Irish economy re-opened in large part in the third quarter, the volume of contactless payments increased by 36 per cent over 2019Q3 and their value by 76 per cent (BPMI, 2020). This source also indicates a rise in the average value of contactless payments from €12.03 to €15.86 over that period.⁷³

The pandemic has caused a sharp fall in economic activity in Ireland and beyond. On its own, this will reduce the demand for cash for spending purposes. Economic recession and an uncertain outlook also tend to boost the demand for cash as a store of value. Consequently, while the effects of the pandemic persist, there may be two opposing forces pulling at the demand for cash. On the one hand, a lower demand for cash in payments can be expected due to less economic activity and an increased rate of substitution from cash to card payments. On the other hand, there may be a greater demand for cash to hoard. Such effects could be expected to have differing effects on the demand for particular notes, with small-denomination notes and coin being in less demand relative to large-denomination notes. Goodhart and Ashworth (2020) find cash in circulation surged in the United States, the euro area and several other countries in response to the onset of the pandemic, with a diminished demand for cash in payments being more than offset by increased hoarding of banknotes.⁷⁴

As noted above, there has been a shift away over time from the use of cash to cards and other cashless instruments in payments across the euro area and beyond. This, in part, reflects a move from purchase at a physical point-of-sale to on-line spending in recent years. In the UK, many “reluctant” consumers there have been learning to use electronic alternatives to cash during the pandemic and appear happy with the change; part of this might be out of the need to make goods purchases on-line rather than over the counter in a shop (Thomas and Megaw, 2020; Kaminska, 2020). A smaller “high street” retail presence in the future, including through the effects of the crisis on the viability of SMEs and changes in consumer preferences in favour of online shopping, would also reduce the demand for cash.

The issues raised by Covid-19 could decline in importance were the virus to diminish as a health issue (including concerns around the use of payment media, including cash) and many consumers were to revert to pre-pandemic

⁷³ Contactless payment limits have increased to €50 in Ireland since 1 April 2020.

⁷⁴ The same authors (Ashworth and Goodhart, 2020) also document the spike in currency demand in several countries at the peak of the 2008 financial crisis.

shopping habits. On shopping habits, the pandemic has seen a reallocation in Ireland from spending outside the home to within (Byrne *et al.*, 2020). Such a shift would cause a change in payment method from cash to card at this time, but could be rewound in some or large part in the future.

6. Will a demand for cash in payments persist over time?

This survey of payment preferences from before the pandemic indicates that heterogeneous payment habits arise in Europe but that there is a move towards the substitution of cards for cash in payments. The current pandemic would appear to be adding to a shift in payment patterns away from cash. At the root of these changes are technological developments that have improved the efficiency of card payments and electronic payments in general and have allowed cards become a viable alternative for most cash payments. Some of these apply at the wholesale level and others at the retail level. Bech *et al.* (2017) note that a move from net settlement to real-time gross settlement has allowed quicker settlement at the wholesale level while faster retail payments are also now occurring as payee funds availability can be coupled (instant transfer) or decoupled (deferred transfer). Electronic payment instructions can now be more quickly transmitted by near-field technology allowing contactless payments to be made at a point-of-sale.

These efficiency gains in electronic payments are enhanced by increased usage among the population. The widespread adoption of a technology can help to reduce pecuniary and non-pecuniary costs to individual users, which in turn leads to a larger network of users arising. This is particularly the case for payments, which can benefit from substantial economies of scale. At some point, the rise in the number of users makes the payment instrument attractive to other parties and they adopt it for use in transactions. This network effect expands the use of the instrument, often in a non-linear manner. Public authorities and other agencies, including PSPs, can speed up the adoption of new instruments through promoting them and putting in place supporting infrastructure. Not only can this increase the demand for the instrument but it can lead it to replace existing payment methods. Esselink and Hernandez (2017), for example, indicate that increasing the provision of card payment infrastructure causes cash usage to fall. The pricing of payment services (including the relative cost of using and ATM and POS facilities) and cross-subsidisation of certain services can influence payment choices among the public. The cost savings from a societal perspective that can arise from the adoption of new payment technologies can be considerable and can act as a spur to their promotion among the public.

Reflecting the growth in card payments in recent years, studies, from before the pandemic, forecast the demand for cash in payments to decline in the years ahead. UK Finance (2019) estimated that cash's share of payments in the UK would decline from 28 per cent in 2017 to 9 per cent in 2028. There is also evidence that coin demand is falling more rapidly than that for notes (Access to Cash, 2019). The discussion in the last section suggests that the pandemic may add to the move away from notes and coins in payments.

A sharp decline in cash's share of payments, however, does not imply that the demand for it will eventually disappear. Network effects fostering a greater use of card payments does not necessarily extend to everyone adopting the new technology. This is proving to be the case for cash where consumers may prefer not to use cards for various reasons. One is that many consumers are in the habit of using cash and do not see the need to change how they make payments and would not expect to be forced to do so. Cash is perceived to have the advantage of helping to maintain anonymity in payments, something that would be of attraction to those concerned about privacy.⁷⁵ It can also help prove beneficial in making person-to-person transactions and informal transfers and is useful in expenditure budgeting and avoiding falling into debt. Although prone to being lost or stolen, cash does not crash (physical money is a time-tested technology) whereas electronic payment systems are vulnerable to failure and cyber-attacks. This is an important attribute of cash relative to electronic payment methods and is a basis for arguing that a cash reserve should be retained as a contingency in the event of a systemic failure in the wider payment system.

In assessing whether consumers will prefer cash or cards, Bjorklund (2017) identifies four factors driving payment choice at the point-of-sale: payment instrument attributes, transaction-specific characteristics, demographic factors, and habit, and argues that the latter two can explain the preference among many consumers for continuing to use cash. As well as the effects of the relative costs of instruments and perceived characteristics such as user-friendliness, speed and safety, Arango-Arango *et al.* (2018) show that cash usage depends on the income and education of the user and transaction size. According to Access to Cash (2019), income levels play a greater role than age in consumers' preferences for cash, with poverty a factor influencing cash usage. Inherited cultural factors can also mean that payment habits are slow to change (Kemppainen, 2019).

⁷⁵ Reserve Bank of New Zealand (2019, p. 25) sums up these points as cash providing "privacy, ability to live off the grid, and an ability to avoid the banking system."

Yet, a stigma is developing around the “cash shopper” that may affect the payment choices of some. A refusal by a vendor to accept payment in cash reduces consumer choice and may lead to social isolation. Based on extensive payment diary data, Van der Cruisen and Knobens (2018) find that payment behaviour is influenced strongly by the environment that people live in, “especially when strong social cohesion arises.” Sveriges Riksbank (2020) finds in a survey of people in Sweden that the elderly and those living in rural areas have a negative view on the use of cash declining. Access to Cash (2019) found that cash is a necessity for 47 per cent of the UK population while 17 per cent would struggle without cash. It also reports that the issue of cash acceptance by merchants and retailers is often a bigger issue in the reduction in cash payments than consumers’ ability to draw down cash.

Consumers, even those that rarely use it, appear in the main to support cash’s continued availability and use. Deutsche Bundesbank (2018b) notes that 88 per cent of respondents to a survey it conducted rejected calls to restrict the use of or do away with cash. The Bank for International Settlements (2020) is of the view that the pandemic has illustrated the divide between those who are comfortable with and have access to electronic alternatives to cash and those who are not, with low-income and vulnerable groups facing difficulties in making payments and receiving funds. The crisis also shows that a large proportion of the public will persist in using cash even during a pandemic.⁷⁶ This speaks to the tension that arises between some retailers who wish not to handle cash and a desire on many consumers’ part to have a choice in the payment method that they use at a point of sale or who are uncomfortable with electronic payment methods.⁷⁷

There is also a euro area dimension to cash payments. While recent studies (Bagnall *et al.*, 2016; Esselink and Hernandez, 2017) emphasise the heterogeneity in payment behaviour across the euro area, reflecting institutional and cultural differences between member states, euro notes and coin are shared as a common currency across 19 countries. The acceptability and transportability of euro cash across a wide geographical area supports its attraction. Consequently, there may be an expectation among the public that euro notes and coin will continue to be welcome and accepted in other member states.

⁷⁶ Using data from an April 2020 survey, Chen *et al.* (2020) report that a majority of Canadians (64 per cent) did not change away from using cash during that early part of the pandemic although their use of cash did fall.

⁷⁷ Reddan (2021) provides examples of Irish high street outlets that have moved to a cashless payment system of late.

There will likely then remain a demand for cash in payments in the years ahead and a need for consumer preferences for this medium to be protected. There is also a supply side argument for cash as it could be used to address any failure of electronic payments owing, for example, to cyber-attacks. Non-payment uses of cash will also sustain demand for it, in particular its store of value property. Schautzer and Stix (2019) attribute the rise in euro cash demand since 2007 to the prevalence of low nominal interest rates (which reduce the opportunity cost of holding cash), increased domestic hoarding (including in response to greater economic uncertainty), and a rise in foreign demand.

7. Conclusion

This article has shown that there has been a move away from using cash in payments to card payments over time but the extent of that change differs across countries. It is to be expected that the move to using electronic payment methods over cash will continue in the years ahead, including through the effects of the current pandemic. This does not mean that demand for banknotes and coin will disappear. Cash's imminent demise has been mistakenly declared in the past but it continues to remain popular both as a medium of exchange and as a store of value.⁷⁸ Looking ahead, there will remain a preference among many people, including the elderly and socially disadvantaged and those who value the privacy and anonymity that comes with cash, to continue using physical banknotes and coin over an intangible digital medium. Other holders and users of cash will take comfort in it being issued by a central bank. Central banks are considering the issuance of central bank digital currencies (CBDCs) in part to address that desire on some cash holders' part by a digital form. CBDCs would be central bank liabilities offered in digital form to the public to be used for the same purposes that they hold physical cash. The ECB (2020) issued a report on the possible issuance of a digital euro. It would be intended as a complement to cash, with it being up to citizens as to which they prefer to use in payments.

A demand for cash to use in payments (as well as to hold for store of value purposes) can be expected over the long run. The ultimate suppliers of cash in modern payment systems, central banks, will then need, in conjunction with other payment providers, to continue to supply and

⁷⁸ As Schautzer and Stix (2019, p. 100) state, "one could probably state that the best manifestation of the bounded knowledge about the demand for cash is that cash has repeatedly been declared to be outdated and doomed to disappear – while in actual fact cash demand has continued to grow." Amromin and Chakravorti (2009) cite a number of academic and financial press contributions from between 1967 and 2007 to the effect that cash would soon become redundant.

distribute banknotes and coin to the public in the future against the backdrop of a falling but likely substantial demand for cash. This is the case with the euro, with the Eurosystem indicating its commitment to ensuring that all citizens have access to euro banknotes and coins across the euro area and that those media will remain reliable, acceptable and attractive to the public.

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