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SME credit conditions in the pandemic recovery

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Abstract

We analyse the credit conditions facing Irish SMEs in the context of the pandemic recovery. SME trading performance has continued to improve, with turnover and profitability indicators rebounding significantly from pandemic lows. Government policy supports have been large and composed mainly of grants. These supports have provided extensive liquidity support to firms and mitigated debt overhang risks, while also likely weighing on demand in the formal credit market. New bank lending to SMEs has fallen moderately and this has been mainly driven by declines in lending to pandemic-affected sectors. SME demand for credit remains low. Credit supply indicators show little sign of stress, with loan application rejection rates remaining steady. The tapering of government supports to businesses may result in a rise in credit demand over the coming months.

1 Introduction

The Covid-19 pandemic represented an extraordinary shock for SMEs in Ireland and across Europe. At the onset of the crisis, SMEs experienced a large decline in turnover and profitability as a result of public health measures and altered consumer behaviour. The scale of the shock was sufficient to generate concern about long-term scarring effects for household and firms, as well as concern about second-order macro-financial effects on the supply of credit.²

Policymakers responded to the crisis with extraordinary measures aimed at boosting liquidity and facilitating the continued flow of credit to households and firms. [Holton et al. \(2020\)](#) describe the initial monetary policy response in Europe, while [De Nora et al. \(2020\)](#) explain the policy rationale for the release of the Countercyclical Capital Buffer in Ireland. Furthermore, [Duignan and McGeever \(2020\)](#) and [Gaffney and Greaney \(2020\)](#) document the scale of liquidity relief provided by loan payment breaks. Separate to these central banking and supervisory measures, national governments provided extensive grant and debt-based financing support to firms throughout the pandemic. [Conefrey et al. \(2021\)](#) document the fiscal policy response in an Irish context.

In this Note, we look in detail at current SME credit conditions and place them in the context of the economic recovery underway and the extraordinary measures taken by policymakers throughout the pandemic. We document a continued recovery in both SME turnover and profitability. The latest observations for autumn 2021 show the continuation of a strong recovery in most sectors, with evidence of a slower profitability recovery for sectors most affected by the pandemic. We also quantify the scale of grant and debt-based support provided to businesses during the pandemic and investigate the drivers of recent credit market lending volumes.

¹ We thank David Duignan, Paul Lyons, Vasileios Madouros, Aisling Menton, Fergal McCann, Paul Reddan, Stephen Sweeney, and Fang Yao for helpful comments and suggestions. The views expressed in this Note are those of the authors and do not necessarily represent the views of the Central Bank of Ireland. Email: elena.durante@centralbank.ie; niall.mcgeever@centralbank.ie

² See the [Central Bank of Ireland Financial Stability Review 2021H2](#).

Our work builds on that of [Kelly et al. \(2021\)](#), who look at household and business credit conditions in the early months of the pandemic. They found evidence of a tightening in credit standards for households and firms in mid-2020. Our study provides complementary evidence focussed specifically on conditions facing small businesses and uses granular firm-level microdata to better understand the drivers of credit market outcomes during the pandemic recovery.

We show that new bank lending to Irish SMEs has fallen by approximately 13 per cent compared with pre-pandemic levels. The trajectory of new lending has varied a lot by sector, with Accommodation & Food seeing by far the largest decline at over 70 per cent. New lending has been stable or even risen in sectors less affected by the pandemic, such as Agriculture.

SME credit demand remains low. The share of SMEs making loan applications to banks was low during the pandemic, with evidence perhaps of a further decline during 2021. This softness in credit demand can help explain the decline in new lending volumes and likely reflects the substantial level of liquidity support provided to firms through grants, tax deferrals, and extensive levels of forbearance on other liabilities, as well as the pre-existing tendency of Irish SMEs to have weaker credit demand than European peers.³

Credit supply indicators show little sign of stress and the decline in new lending volumes does not appear to be driven by an increase in supply constraints. Loan rejection rates remain stable, though with some evidence of increased conditionality in approvals during the acute phase of the pandemic. Banks were no longer tightening credit standards on SME loans as of late 2021. Our findings are consistent with a very modest tightening in credit standards during the early stages of the pandemic, but which has since eased. Extensive policy support and muted credit demand together offer a better explanation for reduced credit volumes.

The forward outlook for SME credit conditions includes two major challenges. First, the tapering of the government support to businesses is underway and payments under the wage subsidy scheme will cease for all firms by May 2022.⁴ While micro-simulation evidence suggests that most firms have a viable path forward ([McCann et al., 2021](#)), there will be a cohort of weak firms that will struggle without supports and extensive levels of forbearance. It is possible that credit demand will rise in the coming months as viable and unviable firms alike seek refinancing from the formal credit market. Second, inflation represents a risk to SME trading performance if it swells input costs or leads to depressed demand as consumers re-consider their spending priorities. In addition, higher inflation has generated discussion on the future course of interest rates.⁵

The remainder of this Note is structured as follows. In Section 2, we examine the trading performance of SMEs in the pandemic recovery. In Section 3, we discuss the important role of government supports in providing liquidity to businesses during the pandemic. In Section 4, we analyse trends in new bank lending volumes. In Sections 5 and 6, we investigate the role of credit demand and supply in determining lending outcomes. We conclude in Section 7.

³ Note also that approximately half of Irish SMEs report have no bank debt outstanding and approximately a fifth report having no bank relationship manager. See [Central Bank of Ireland FSR 2020-I](#).

⁴ The share of wage costs met by the subsidy in December 2021 was approximately 10 per cent and 17 per cent for the Accommodation & Food and Art, Entertainment & Recreation sectors, respectively (See Table 7.4 of the [CSO Quarterly National Accounts 2021Q4](#)). Separately, 95,000 enterprises have deferred tax liabilities that will begin to fall due in 2023 ([Revenue Commissioners, 2022](#)).

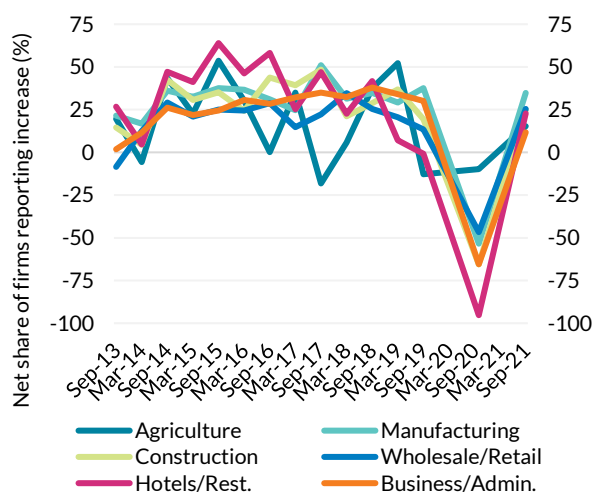
⁵ See the recent [speech](#) given by the ECB's Chief Economist Philip Lane.

2 Trading performance in the pandemic recovery

Turnover levels continued to improve across all sectors, as of autumn 2021. Chart 1 shows the net share of SMEs reporting an increase in turnover. Positive values mean that more businesses are reporting increases than are reporting decreases. This indicator has registered a sharp recovery from pandemic lows, even for badly affected sectors like Accommodation & Food, and stood at 25 per cent in September 2021. The rate of improvement was thus quite positive, even before the general relaxation of public health measures in early 2022.⁶

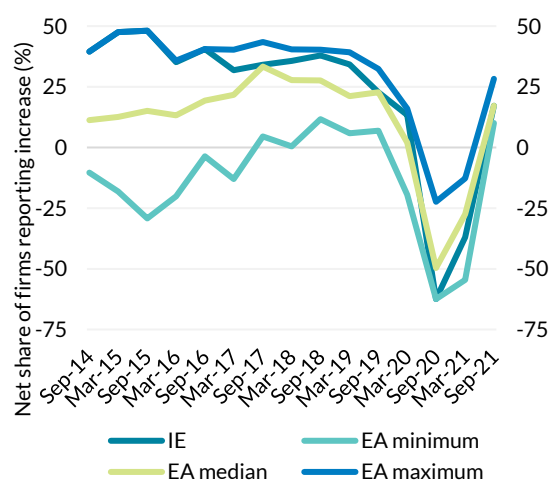
The turnover recovery of Irish SMEs is following a very similar trend to that of other euro area countries. Chart 2 shows the net share of SMEs reporting increased turnover. Positive values again mean that more firms are reporting increases than are reporting decreases. Irish firms are very close to the median recovery level in the euro area.

Chart 1: SME turnover levels are recovering from the pandemic shock



Source: SME Credit Demand Survey
 Notes: The share of SMEs reporting a rise in turnover in the previous six months minus the share of SMEs reporting a decline in turnover by sector.

Chart 2: Irish SME turnover is recovering similarly to that of other euro area firms



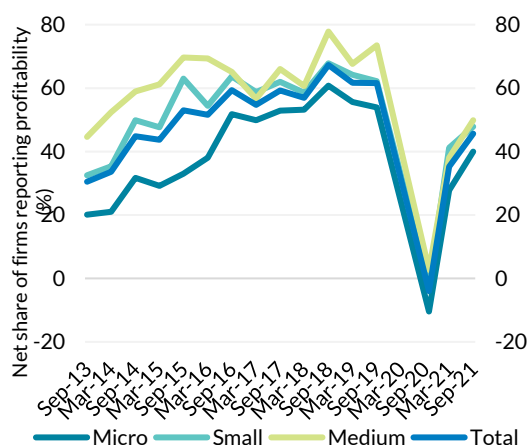
Source: ECB SAFE
 Notes: The share of SMEs reporting a rise in turnover in the previous six months minus the share of SMEs reporting a decline in turnover. EA refers to 'euro area'.

SME profitability indicators have also improved, though with evidence of a slower recovery in some sectors. Chart 3 shows the net share of SMEs reporting that they were profitable as of September 2021 by different size cohorts. Positive values mean that more firms are reporting profits than are reporting losses. The latest data show a significant rebound on pandemic lows, with the net share hitting approximately 45 per cent. This, however, is still below pre-pandemic levels of 60 per cent.

Profitability had improved markedly by autumn 2021 for most sectors, with the net share indicator hitting approximately 50 per cent in many cases. The Accommodation & Food sector stands out as having a very large deterioration during the acute phase of the crisis and a longer path towards recovery.

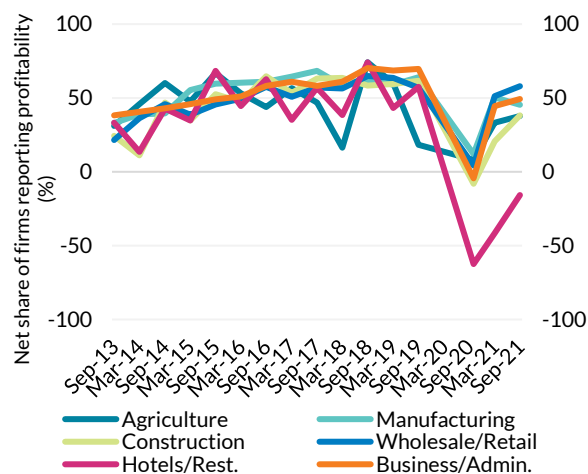
⁶ See the [Central Bank of Ireland 2022Q2 Quarterly Bulletin](#) for detail on the continued recovery into 2022.

Chart 3: SME profitability is also recovering



Source: Credit Demand Survey
 Notes: The share of SMEs reporting profitability over the previous six months minus the share of SMEs reporting loss-making by sector.

Chart 4: There are signs of a slower recovery in some sectors



Source: Credit Demand Survey
 Notes: The share of SMEs reporting profitability over the previous six months minus the share of SMEs reporting loss-making.

3 Policy context

The scale of policy support provided to SMEs during the pandemic means that credit market outcomes, such as new lending volumes, cannot be viewed in isolation. Grants have reduced trading losses, pushing down the amount of liquidity finance firms might have needed to find elsewhere. Tax deferrals and extensive creditor forbearance measures also boosted SME liquidity⁷ and have likely placed downward pressure on credit demand in the formal credit market. On the other hand, policies such as the Credit Guarantee Scheme may have had a more modest effect in the opposite direction by promoting access to finance for some SMEs through the financial sector.

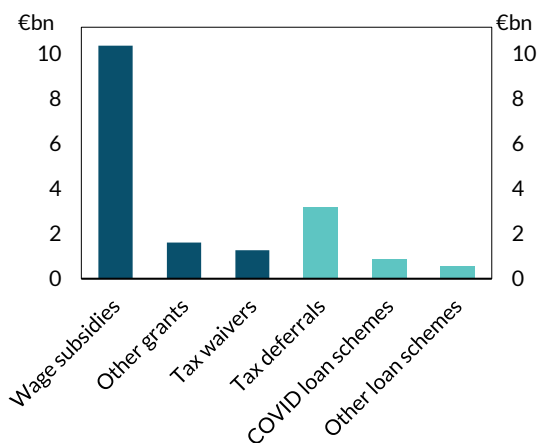
State supports to businesses were large and mainly in the form of grants. Chart 5 shows the level of utilisation of various supports during the course of the pandemic. The wage subsidy scheme is by far the largest scheme, while there were several additional grant schemes, and a local business tax (“rates”) waiver. The state also provided direct debt-like support to firms through an extensive tax deferral (“warehousing”) programme and this was substantially larger in scale than debt-based support schemes channelled through the financial sector. The relatively low utilisation of schemes like the Credit Guarantee Scheme must be considered alongside the heavily utilised €3.1bn tax deferral scheme.

SMEs have also boosted their liquidity by deferring payments on non-tax liabilities. Chart 6 shows the share of SMEs reporting the deferral of liabilities in each of three survey waves during the pandemic. Tax deferrals stand out again as a major source of liquidity finance. However, SMEs also made heavy use of payment breaks⁸ and forbearance on loans to banks and other financial creditors, as well as deferrals of payments to suppliers and landlords.

⁷ See the [Central Bank of Ireland Financial Stability Review 2021H2](#).

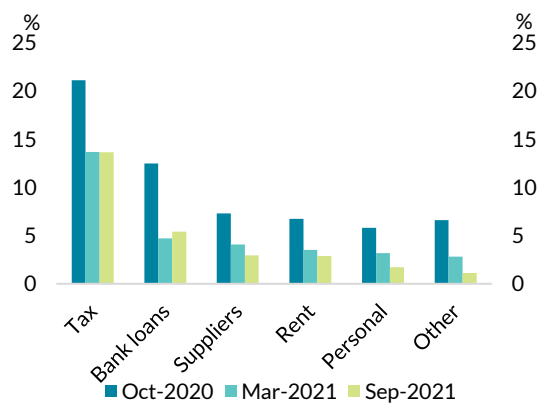
⁸ See [Duignan and McGeever \(2020\)](#).

Chart 5: State supports to businesses were large and mainly in the form of grants



Source: Department of Enterprise, Trade and Employment; Revenue Commissioners
 Notes: The level of support utilised by Irish businesses during the pandemic by support type. The darker coloured columns relate to grant-like supports and the lighter coloured columns relate to debt-like supports.

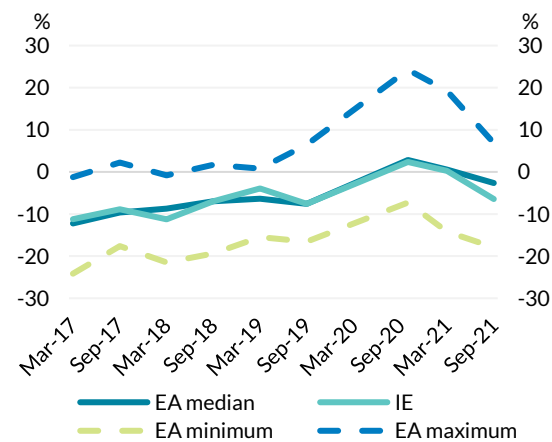
Chart 6: SMEs have continued to defer liabilities



Source: SME Credit Demand Survey
 Notes: The proportion of SMEs reporting missing a payment to on any of the stated liabilities in the previous six months.

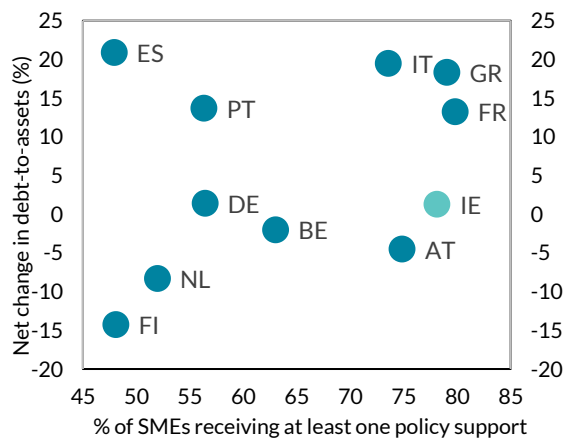
Government supports boosted SME liquidity and the heavy use of grants mitigated debt overhang risks. Chart 7 shows the net share of SMEs reporting an increase in their debt-to-assets ratio. Positive values mean that more firms are reporting an increase than are reporting a decrease. While this indicator rose modestly for Ireland during the early stages of the pandemic, it has since reversed trend and turned negative. Chart 8 shows this net share indicator between October 2020 and March 2021 at a country-level versus the share of SMEs receiving at least one form of government policy support. Irish SMEs have received high levels of government support compared with some other countries.

Chart 7: More SMEs are reducing leverage than are increasing leverage



Source: ECB SAFE
 Notes: The share of SMEs reporting an increase in their debt-to-assets ratio in the previous six months minus the share of SMEs reporting a decrease. EA refers to 'euro area'.

Chart 8: Debt overhang risk has been mitigated, likely due to grant-based supports



Source: ECB SAFE
 Notes: The share of SMEs receiving at least one policy support versus the share of SMEs reporting an increase in their debt-to-assets ratio between October 2020 and March 2021 minus the share of SMEs reporting a decrease.

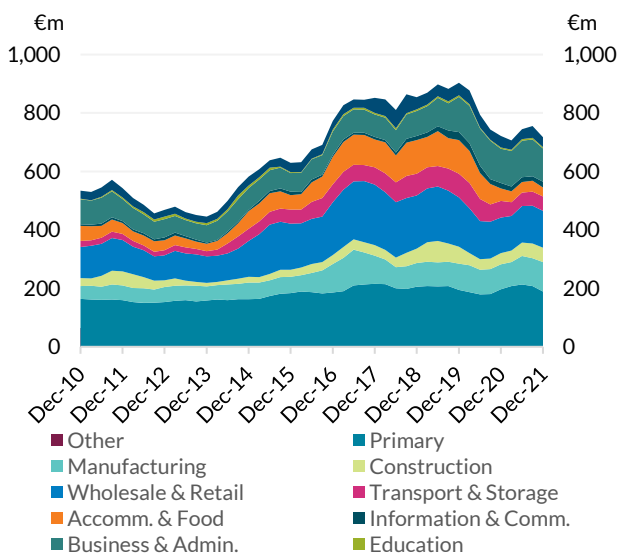
The policy choice to weight support more towards grants and less towards debt-like supports came with a significant upfront cost to the exchequer. The imperfect targeting of grant support may have also provided cash support to unviable firms that may ultimately fail, as well as to many companies who did not require support to ensure survival. Nonetheless, there are financial stability benefits associated with grant supports. The primary benefit is in mitigating the balance sheet impact of pandemic losses and curtailing debt overhang issues in the recovery, reducing a potential drag on investment and employment levels post-crisis (Kalemli-Özcan et al., 2019).

4 New lending

We next examine new bank lending flows in the SME credit market. New bank lending to SMEs is down to 2016 levels. Chart 9 shows new lending by Irish registered banks to non-financial and non-real estate Irish SMEs by enterprise sector. The series is a four-quarter rolling average, so as to accommodate seasonality in lending and to better highlight trends. Quarterly bank lending volumes have fallen by 13 per cent, from approximately €900m to €780m.⁹

The trajectory of lending volumes has varied a lot by sector, with Accommodation & Food seeing the largest decline. Chart 10 shows gross new lending flows by sector, indexed to 2019 levels. The Accommodation & Food sector has seen a decline of approximately 70 per cent since 2019 and had yet to rebound as of December 2021. This sector alone can explain about 40 per cent of the aggregate decline in new lending. Another large sector, Wholesale & Retail, is still down approximately a quarter on pre-pandemic levels. However, half of sectors have seen modest or no declines. The Primary sector¹⁰ (dominated by Agriculture) saw no decline in new lending, while Manufacturing saw lending volumes rise by over 10 per cent.

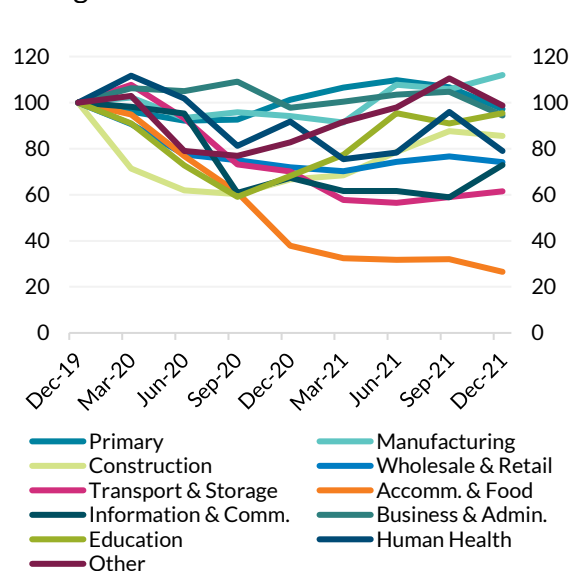
Chart 9: New bank lending has fallen to 2016 levels



Source: Central Bank of Ireland

Notes: A four-quarter rolling average of new lending from Irish registered banks to Irish non-financial, non-real estate SMEs by sector.

Chart 10: Accommodation & Food has seen the largest decline



Source: Central Bank of Ireland

Notes: A four-quarter rolling average of new lending from Irish registered banks to Irish non-financial, non-real estate SMEs by sector, indexed to 2019 levels.

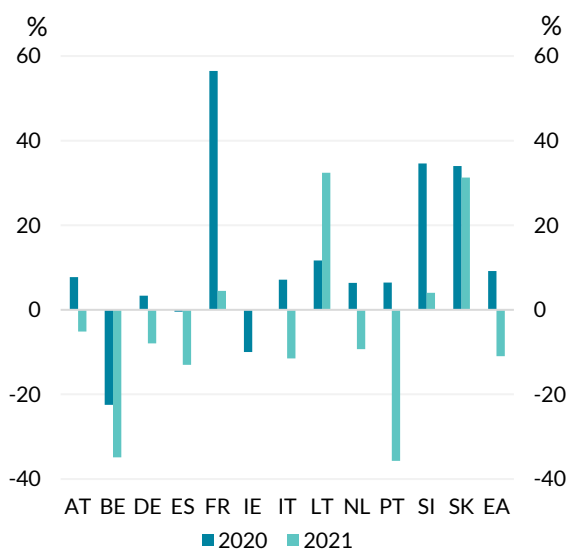
⁹ By contract, new lending by non-bank providers to non-real estate SMEs was approximately €200m per quarter in 2019 and 2020 (Heffernan et al., 2021).

¹⁰ Primary enterprises are those in the Agriculture, Forestry & Fishing and Mining & Quarrying sectors.

New lending growth in the euro area was positive during the acute phase of the pandemic, but has since cooled. Chart 11 shows the percentage change in non-revolving loan originations below €1m in a range of euro area countries, relative to 2019 levels of new lending. Lending rose by approximately 10 per cent in 2020, driven by very substantial growth in some jurisdictions and the large role of government supports that were channelled through the banking sector. Figures for 2021 show a cooling down of new lending, with volumes down 11 per cent on 2019 levels.

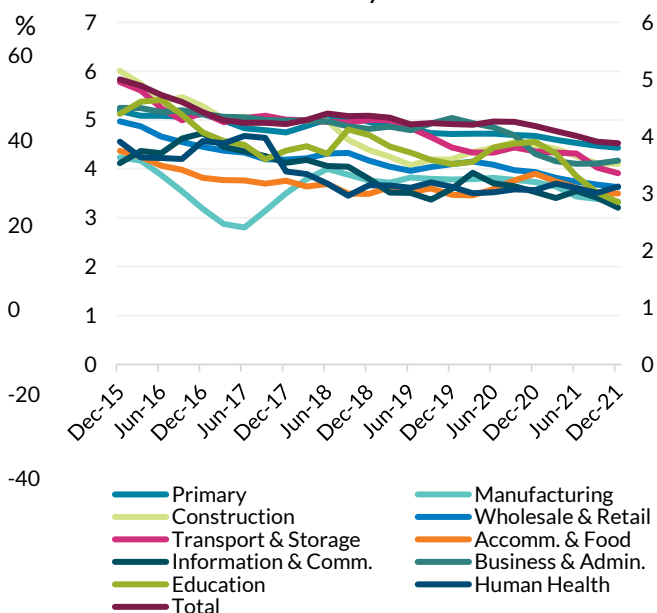
Interest rates on new lending to Irish SMEs have continued to trend slowly downwards. Chart 12 shows the average interest rate on new SME loans by sector has been falling in recent years. Average rates were approximately 5 per cent in 2015 and were below 4 per cent in December 2021. While banks reported a modest tightening of credit standards during the acute phase of the pandemic (see Chart 22 below and the [2021 SME Market Report](#)), this has not translated into higher rates on new loans.

Chart 11: Net lending under €1m in Europe has fallen below 2019 levels



Source: European Central Bank
 Notes: The percentage change in new bank lending volumes of non-revolving credit below €1m relative to 2019 levels by country. EA refers to 'euro area'.

Chart 12: SME interest rates in Ireland have continued to trend slowly downward



Source: Central Bank of Ireland
 Notes: A four-quarter rolling balance-weighted average of interest rates on new lending by Irish registered banks to Irish non-financial, non-real estate SMEs by sector.

The ongoing tapering of government supports has the potential to generate increased credit demand from illiquid or distressed companies. SMEs have been able to access extensive grant support and liquidity finance through tax deferrals and, to a lesser extent, a partial credit guarantee scheme. As access to grant aid ceases and deferred liabilities begin falling due, affected businesses may seek to access finance from the formal credit market in greater numbers.

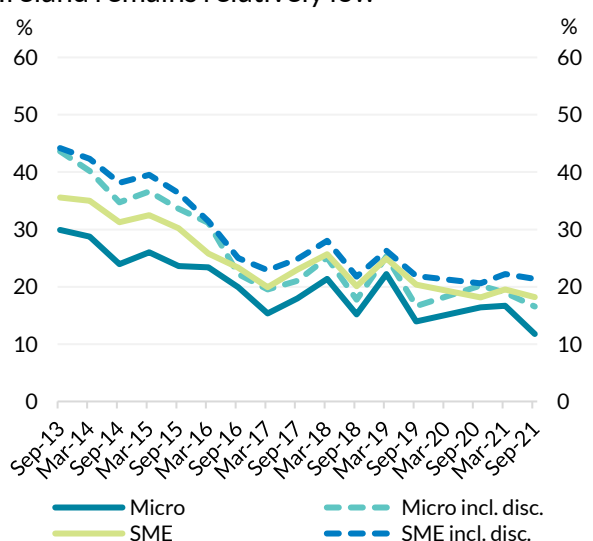
5 Credit demand

SME credit demand remains low. Chart 13 shows the share of micro and SME enterprises that made a credit application in the previous six months. In addition, the dashed lines include “discouraged”

borrowers that did not apply because they thought their application would be rejected.¹¹ The credit application rate has been relatively steady in recent years, following a significant decline between 2013 and 2017. Demand for credit from financial lenders did not rise during the pandemic and fell further in mid-2021.

SME credit demand has returned to pre-pandemic levels in the euro area, after a significant rise in many European countries in the initial stages of the pandemic. The application rate rose by approximately 10 percentage points in the median euro area country in mid-2020. This reflects the acute liquidity problems brought on by pandemic-induced turnover declines, as well as the channelling of government supports to firms through the banking sector in several jurisdictions. Credit demand has since cooled and returned to pre-pandemic levels. Irish SMEs in this survey report a significant reduction in credit demand in 2021 that remains significantly below the euro area median.

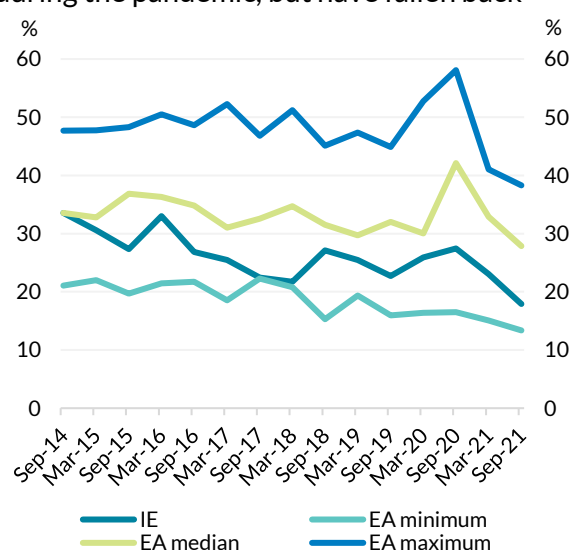
Chart 13: The rate of SME credit applications in Ireland remains relatively low



Source: Credit Demand Survey

Notes: The share of businesses reporting that they made a credit application in the previous six months. Dashed lines include “discouraged” borrowers (i.e., businesses that did not apply because they thought they would be rejected).

Chart 14: Application rates in Europe rose during the pandemic, but have fallen back



Source: ECB SAFE

Notes: The share of businesses reporting that they made a credit application in the previous six months. EA refers to ‘euro area’.

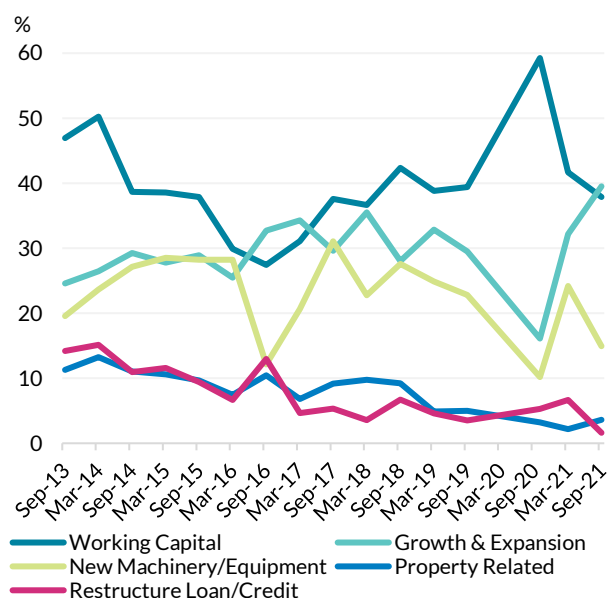
The rationale Irish SMEs cite for borrowing has normalised, following a sharp rise in working capital finance requests in 2020. Chart 15 shows that the proportion of credit applications that are for working capital purposes stood at approximately 40 per cent in the years prior to the pandemic, but jumped to 60 per cent in mid-2020. Borrowing for investment purposes fell sharply, whether for expansion and growth or for new machinery or equipment. This decline in investment borrowing coincided with a sharp decline in new company formation at the start of the pandemic (McGeever et al., 2020). The share of borrowing firms citing working capital or investment rationales has since reverted to pre-pandemic levels, likely reflecting the strong recovery experienced by many firms and the lowering of economic uncertainty associated with the pandemic.¹²

¹¹ Ferrando and Mulier (2022) provide an excellent review of the discouraged borrower literature.

¹² See Bobasu et al. (2021) for a review of the channels through which uncertainty affects the real economy including negative effects on corporate investment and hiring decisions.

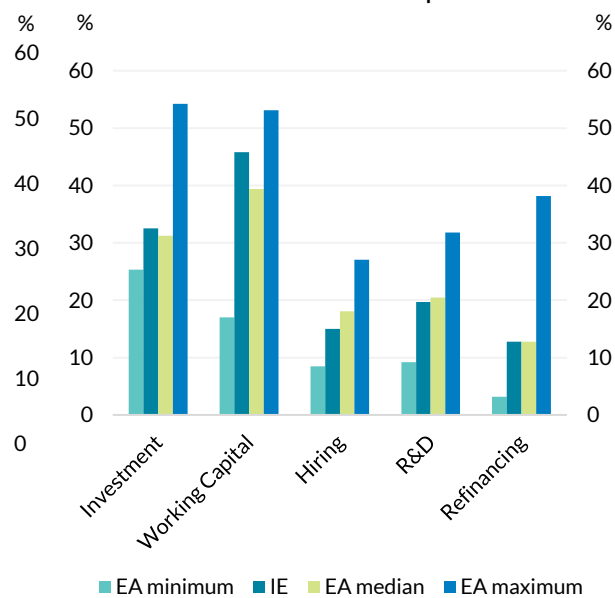
Irish SMEs that borrow do so for similar reasons to other European SMEs. Chart 16 shows that Ireland is close to the median euro area level for the proportion of borrowers citing investment, working capital, hiring, R&D, and refinancing as their rationale. It is important to recall here that the Irish credit application rate is among the lowest in the euro area, so the real investments made by Irish SMEs may amount to less than in countries with substantially more borrowing. [Lawless et al. \(2020\)](#) review the investment patterns of Irish SMEs and highlight areas of comparative under-investment.

Chart 15: Borrowing for liquidity and investment has normalised



Source: Credit Demand Survey
Notes: The share of borrowing enterprises by cited rationale.

Chart 16: Irish SMEs that borrow do so for similar reasons as other European SMEs

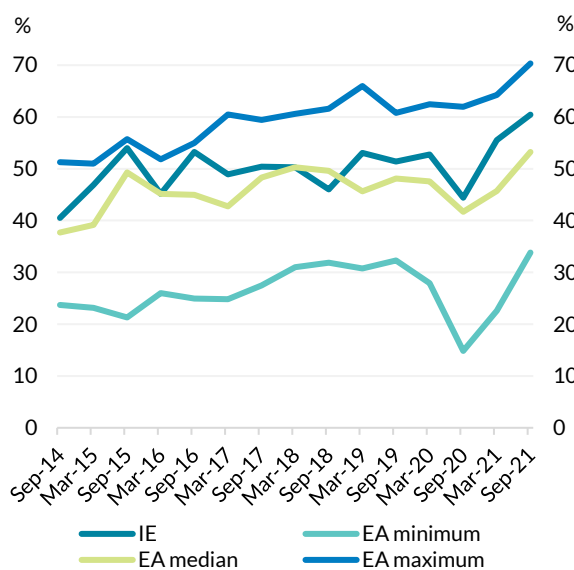


Source: ECB SAFE
Notes: The rationale cited by borrowing enterprises as of September 2021. EA refers to 'euro area'.

The main reason that SMEs don't apply for credit is that they have sufficient internal funds. Chart 17 shows the proportion of SMEs citing this reason in Ireland and other euro area countries. 60 per cent of Irish SMEs that did not borrow recently said they already had sufficient internal funds for their needs, up from approximately 50 per cent prior to the pandemic. A similar increase is evident in other euro area countries.

Irish banks have reported a slight weakening in SME credit demand. Chart 18 shows a country-level summary of how banks respond when asked if SME credit demand has changed. The series are diffusion indices and a positive value indicates rising credit demand. Irish banks report modest variation in demand during the initial phase of the pandemic, followed by a slight weakening in demand in 2021. This aligns with the modest decline in credit demand reported by SMEs themselves (see Charts 13 and 14).

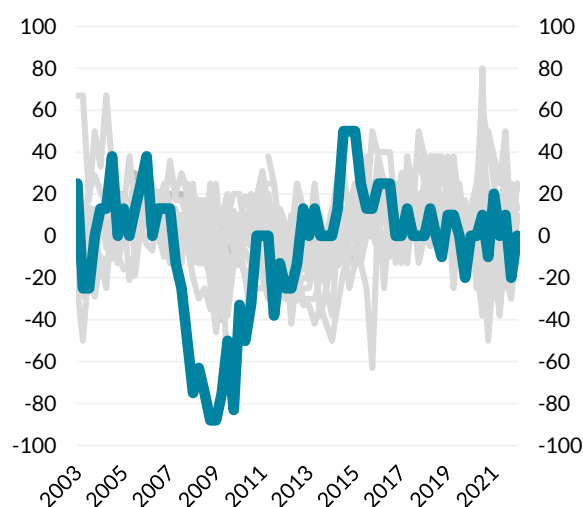
Chart 17: The main reason SMEs don't apply for credit is that they have sufficient internal funds



Source: ECB SAFE

Notes: The share of enterprises citing “sufficient internal funds” as their reason for not applying for credit.

Chart 18: Irish banks have reported a slight weakening in SME credit demand



Source: ECB Bank Lending Survey

Notes: Diffusion index summarising the views of banks regarding SME credit demand in the previous three months. Positive values indicate rising demand and negative values falling demand. Other euro area countries are in grey.

6 Credit supply

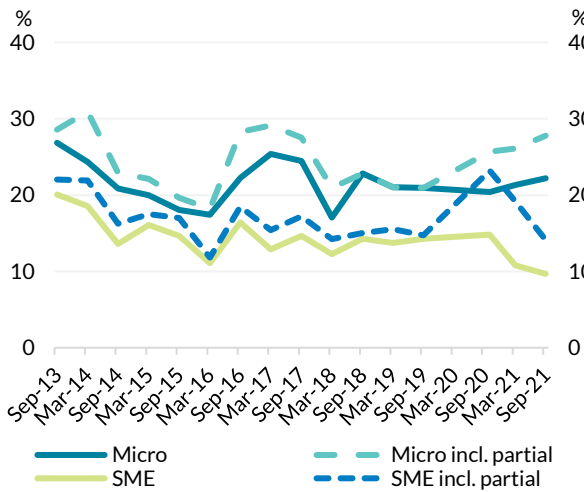
Lastly, we consider developments in credit supply indicators. Rejection rates on SME loan applications remain stable. Chart 19 shows the share of applications that were rejected for micro and SME enterprises. These indicators have remained relatively stable in recent periods, with SME rejection rates perhaps showing some evidence of a decline. When we include applications that were only partially approved (e.g., loan approval, but with conditions such as personal guarantees attached), then we see a rise during the acute phase of the pandemic. This rise in partial approval was reversed for SMEs, but has remained for micro enterprises. Nonetheless, micro enterprises generally have higher rejection rates and the present rate is similar to that observed in 2016-2017.

The picture across Europe looks very similar to Ireland. Chart 20 shows that rejection rates did not rise significantly during the pandemic for the majority of euro area countries. Since 2014, Irish SMEs have generally reported a higher loan rejection rate than the median euro area country. This patterns continued in 2021, though Ireland is still well below those jurisdictions with the highest rejection rates.

An alternative indicator that gets at credit supply conditions is the rate of borrower discouragement in the market. Chart 21 shows the proportion of Irish SMEs that are discouraged – that is, that did not apply for credit because they believed their application would be rejected. This indicator has ticked up over recent periods to 4 per cent of enterprises. This may reflect perceived weakness on the part of firms about their own financial performance or negative views about the willingness of the financial sector to offer funding. [Ferrando and Mulier \(2022\)](#), however, report intriguing results regarding discouraged borrowers and argue that many of these businesses – perhaps 40 per cent – would have a high likelihood of approval if they actually made an application.

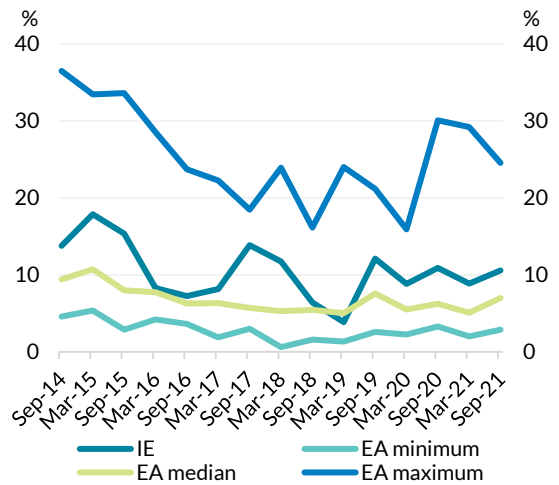
A further 40 per cent would have some prospect of approval, while only about 20 per cent of discouraged borrowers would be very likely to face rejection.

Chart 19: Loan rejection rates are stable in Ireland



Source: Credit Demand Survey
 Notes: The share of loan applications rejected by enterprise size. Dashed lines include partial rejections.

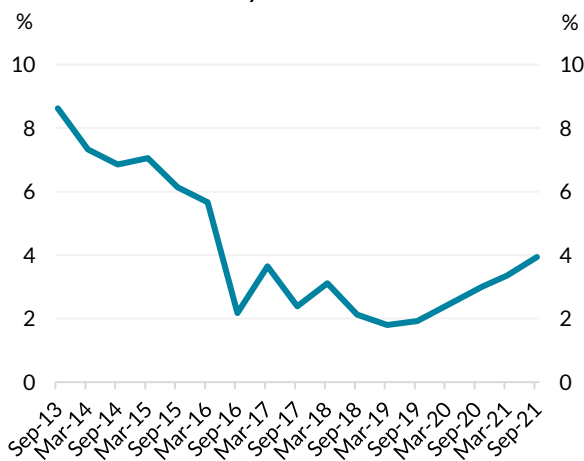
Chart 20: The rejection rate in Ireland is usually higher than the median in Europe



Source: ECB SAFE
 Notes: The share of loan applications rejected. EA refers to 'euro area'.

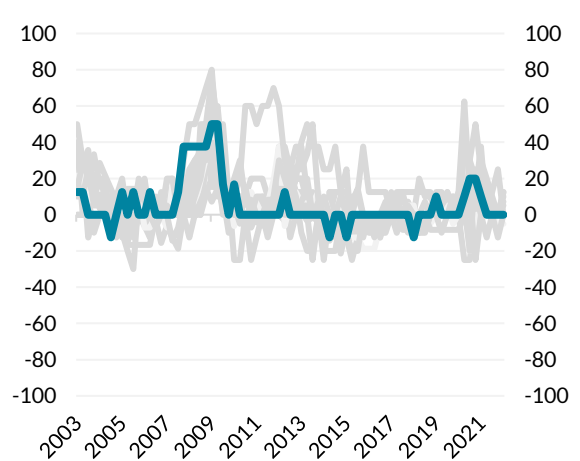
Finally, we investigate how banks view their own credit standards as they relate to SME loan applications. Chart 22 shows evidence from the ECB Bank Lending Survey that Irish banks tightened lending standards during the acute phase of the pandemic, but were no longer tightening in 2021. Furthermore, evidence published in the Central Bank of Ireland's [SME Market Report 2021](#) showed that loans with partial government guarantees did not face the same tightening as those without guarantees. In summary, our findings are consistent with a modest tightening in credit conditions during the pandemic.

Chart 21: The rate of borrower discouragement has risen moderately



Source: Credit Demand Survey
 Notes: The share of enterprises that did not make a loan application because they believed that it would be rejected.

Chart 22: Banks are no longer tightening credit standards



Source: ECB Bank Lending Survey
 Notes: Diffusion index summarising the change in credit standards banks apply to SME credit applications in the previous three months. Positive values indicate tightening and negative values loosening. Other euro area countries are in grey.

7 Conclusion

The Covid-19 pandemic represented an extraordinary shock for businesses across Europe and consequently policymakers introduced extraordinary fiscal, monetary and supervisory measures to support the liquidity needs of firms. In light of this, the monitoring SME trading performance and credit conditions is key from a policy perspective and allows for the study of potential risks from a financial stability perspective.

This note highlights several aspects of the post-pandemic recovery experienced by the Irish SMEs. In particular, Irish SMEs have generally experienced a strong recovery in line with their euro area peers. SME turnover and profitability have recovered significantly relative to pre-pandemic levels. The heavy use of grant support during the pandemic has mitigated debt overhang risks and the forward outlook for SMEs is generally positive.

New bank lending to SMEs is down to 2016 levels, but the trajectory of lending volumes has been quite heterogeneous across sectors, with Accommodation & Food alone explaining about 40 per cent of the aggregate decline.

SME credit demand remain low. Demand for credit from financial lenders did not rise during the pandemic and appears to have fallen further during 2021. In the euro area, credit demand has returned to pre-pandemic levels after a significant rise in many European countries in the initial phase of the pandemic. Finally, developments in credit supply indicators show that Irish SMEs rejection rates on loan application remain stable.

Two issues stand out as having the potential to impact SME credit conditions in the near future. First, the tapering of government supports may prompt unviable and viable firms alike to move to the formal credit market for refinancing. Second, inflation may lead to a deterioration in firm profitability through input cost rises and higher debt servicing burdens.

References

Bobasu, Alina, André Geis, Lucia Quaglietti, and Martino Ricci, 2021, Tracking global economic uncertainty: Implications for the euro area, ECB Working Paper Series No. 2541.

Conefrey, Thomas, Rónán Hickey and Niall McInerney, 2021, COVID-19 and the public finances in Ireland, Economic Letter No. 3, Central Bank of Ireland.

De Nora, Giorgia, Eoin O'Brien, and Martin O'Brien, 2020, Releasing the CCyB to support the economy in a time of stress, Financial Stability Note No. 1, Central Bank of Ireland.

Duignan, David and Niall McGeever, 2020, Which firms took COVID-19 payment breaks?, Financial Stability Note No. 6, Central Bank of Ireland.

Ferrando, Annalisa and Klaas Mulier, 2022, The real effects of credit constraints: Evidence from discouraged borrowers, *Journal of Corporate Finance* Vol. 73.

Gaffney, Edward and Darren Greaney, 2020, COVID-19 payment breaks on residential mortgages, Financial Stability Note No. 5, Central Bank of Ireland.

Kalemli-Özcan, Sebnem, Luc Laeven, and David Moreno, 2019, Debt overhang, rollover risk, and corporate investment: Evidence from the European crisis, ECB Working Paper Series No. 2241.

Kelly, Jane, Rory McElligott, Conor Parle, and Martina Sherman, 2021, Credit conditions for Irish households and SMEs, Economic Letter No. 5, Central Bank of Ireland.

Lawless, Martina, Maria Martinez-Cillero, Conor O'Toole, Eric Gargan, Leona Cantillon, and Peter McGoldrick, SME Investment Report 2019, ESRI Survey and Statistical Report Series No. 86, Economic and Social Research Institute.

McCann, Fergal, Niall McGeever, and Fang Yao, 2021, SME viability in the COVID-19 recovery, Research Technical Paper No. 9, Central Bank of Ireland.

McGeever, Niall, Cecilia Sarchi, and Maria Woods, 2020, Irish company births and insolvent liquidations during the COVID-19 shock, Economic Letter No. 13, Central Bank of Ireland.

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