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How resilient are Irish SMEs to input cost inflation?

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Abstract

The trading performance of Irish small and medium enterprises (SMEs) has thus far proven resilient in the face of significant input cost inflation. Turnover levels increased in 2022, with firms passing on cost increases to customers. Higher prices and exceptionally strong consumer demand broadly allowed most firms to maintain or even increase their profit margins, though a fifth of the firms saw their margins fall. Simulation evidence suggests that profit margins would remain robust in 2023 under baseline projections. Nonetheless, our analysis shows that profit margins would be sensitive to a slump in consumer demand and persistently elevated costs.

1 Introduction

Inflation is presenting significant challenges for households and businesses in Ireland. The real incomes and savings of households are being put under strain, while rising input costs have prompted businesses to adapt their production and pricing strategies. The scale of input cost rises has prompted interest in the impact of cost inflation on the financial resilience of firms.

In this *Note*, we study the resilience of SMEs in Ireland to input cost inflation in 2022 and present simulation evidence on the future path of performance to end-2023 under baseline and adverse scenarios. We do this by analysing granular firm-level responses from the September 2022 wave of the Credit Demand Survey commissioned by Department of Finance.[2] This is a bi-annual representative survey of approximately 1,500 Irish SMEs. Each wave is based on a new cross-section of businesses and provides detailed information on the composition of firm costs, trading performance, and balance sheet health. We adopt baseline and adverse scenarios for our simulation analaysis from the Central Bank of Ireland's 2023Q1 Quarterly Bulletin and the 2023 European Banking Authority stress test, respectively.

The trading performance of SMEs has thus far proven resilient in the face of significant cost inflation. Turnover grew in 2022 across business sectors. This is explained by two factors. First, firms raised their unit prices significantly. Second, consumer demand has proven to be exceptionally robust in the context of these price rises. Consequently, the profit margins of most firms remained stable or increased. Only approximately a fifth of firms saw their profit margins decline in the six months to September 2022. Aggregate indicators, such as consumer sales volumes and employment levels, suggest that strong trading performance has continued in the first half of 2023.[3]

In our simulation to the end of 2023, SME profit margins are expected to remain robust under a baseline scenario consistent with the Central Bank of Ireland's 2023Q1 Quarterly Bulletin.

[1] We thank Mark Cassidy, Edward Gaffney, Fergal McCann, Martin O'Brien, and seminar participants for helpful comments. The views we express in this Note are our own and do not necessarily represent the views of the Central Bank of Ireland.

[2] See also the report published by the Department of Finance on the March to September 2022 survey wave.

[3] See CSO data on employment and retail sales.

However, profit margins remain sensitive to a slump in consumer demand. In an adverse scenario in which consumer demand falls and costs were to remain elevated, then margins would decline.

This Note adds to recent work released by the Central Bank of Ireland on how high inflation and the necessary monetary policy response is impacting the financial resilience of households (Adhikari, 2022; Adhikari and Yao, 2023; Arrigoni et al., 2022; Byrne et al., 2023), firms (Financial Stability Review 2022-II), and lending institutions (Morell et al., 2022). Our analysis focusses on the financial performance of SMEs in the current inflationary environment. This is motivated by the important role these firms play in aggregate employment, investment, and the potentially amplifying macro-financial effects that distress in the sector could result in. For further research on the relationship between firm profits and inflation, see Arce et al. (2023) and Glover et al. (2023).

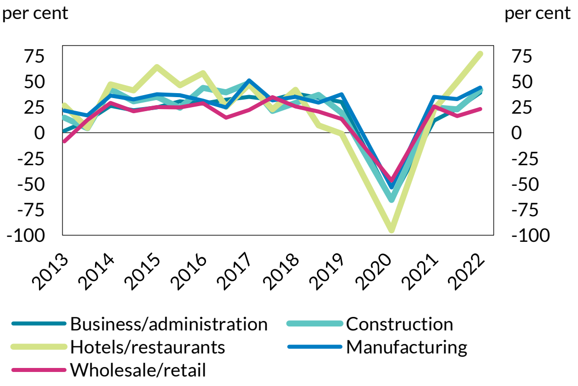
The remainder of this Note is structured as follows. In Section 2, we study business turnover and profitability in mid-2022. In Section 3, we conduct a simulation analysis of business profitability and distress to end-2023 under baseline and adverse scenarios. We conclude in Section 4.

2 Turnover and profit margins up to September 2022

Turnover increased in mid-2022 across different business sectors. Chart 1 shows the net share of companies reporting increased turnover by sector. A positive value for this measure means that more firms in a given sector experienced an increase in their turnover than experienced a decrease. This indicator has returned to pre-pandemic levels among all sectors, with the Accommodation & Food sector rebounding strongly after the COVID-19 health emergency.

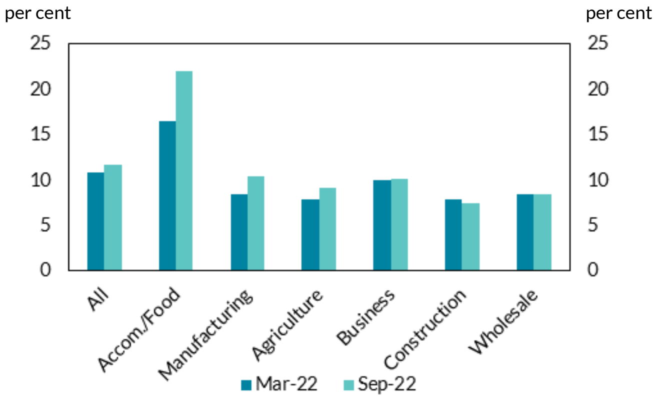
Firms were able to sustain the impact of energy price rises up to September 2022. Chart 2 shows the share of total expenditure made up by energy. Energy costs made up 10 per cent of operating costs in the six months to March 2022 and we observe similar estimates from previous survey waves. Although energy prices increased substantially, the energy share of operating costs increased more modestly, to 12 per cent in the six months to September 2022. This possibly reflects firms taking measures to reduce energy use given higher prices. However, we are taking no consideration here of any indirect energy-related inflation passed through non-energy inputs. The Accommodation & Food sector appears more exposed to energy prices: the energy share of its cost base rose from 17 per cent in March 2022 to 22 per cent in September 2022.

Chart 1: Turnover increased in 2022



Source: SME Credit Demand Survey
Note: 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: The energy share of operating costs remained broadly constant up to autumn 2022

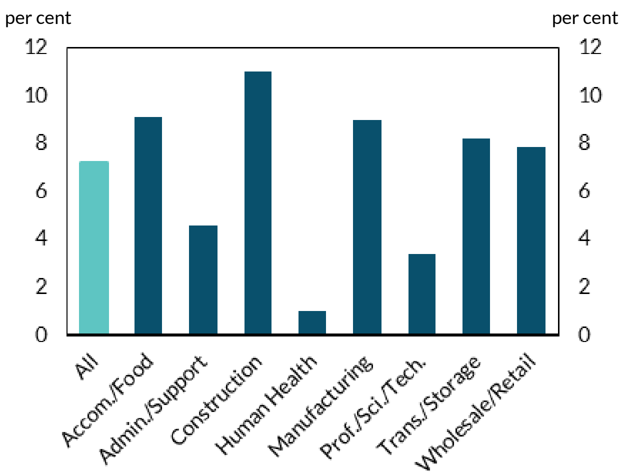


Source: SME Credit Demand Survey
Notes: The energy cost share of expenditure by period and sector.

Firms raised prices significantly in 2022. Chart 3 shows that the mean unit price increase of firms was 7 per cent, roughly in line with core inflation.[4] Price rises vary by sector, with an 11 per cent increase in Construction and 9 per cent increase in both Accommodation & Food and Manufacturing. Human Health and Professional, Scientific & Technical firms report the lowest price rises at 1 and 3 per cent, respectively. 61 per cent of businesses report that they have raised their unit prices between March and September 2022 and only 2 per cent report price decreases.

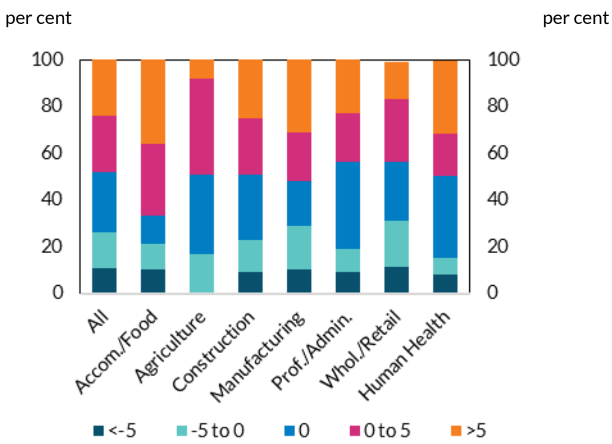
Gross profit margins[5] overall remained stable or increased in 2022. Chart 4 shows the share of firms reporting various profit outcomes by sector, measured as changes in margin in percentage points. 74 per cent of firms reported stable or increasing profit margins and 24 per cent reported an increase of 5 percentage points or more. Accommodation & Food showed the most pronounced rise in profit margins, with 36 per cent of firms in the sector reporting increases above 5 percentage points. Agriculture had relatively stable profit margins. The sectors with the most firms facing lower margins are Manufacturing and Wholesale & Retail, though 53 and 42 per cent of firms increased their margins in each sector, respectively.

Chart 3: Firms raised prices significantly in 2022



Source: SME Credit Demand Survey
Notes: The mean per cent change in unit price by sector.

Chart 4: Gross profit margins broadly remained stable or increased in 2022



Source: SME Credit Demand Survey
Notes: The share of firms by percentage point change in gross profit margin by sector.

We next look at the pricing decisions of firms and their profit outcomes. Table 1 shows the share of firms in each of nine sub-groups which we define based on how the firm changed its unit price and their realised profit outcome. 62 per cent of companies increased their unit prices and 34 per cent both increased unit prices and experienced an increase in their profit margin. 15 per cent of firms increased their prices but nonetheless experienced a decrease in profit margins. Profit outcomes were mixed for firms that held their prices unchanged, with approximately 40 per cent of this group (9 per cent of all firms) seeing profits decline and 30 per cent seeing profits increase. Among the small share of firms that reduced their prices, profits generally remained unchanged.

[4] See the CSO Consumer Price Index data to September 2022.
[5] Defined as turnover minus operating costs all divded by turnover.

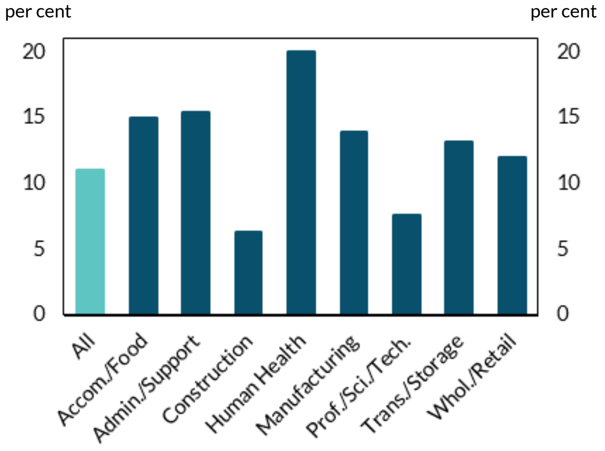
Table 1: The share of firms by price change and profit margin outcome

		Profit outcome		
		Decrease	No change	Increase
Price change	Decrease	0.9%	13.3%	0.4%
	No change	8.8%	0.1%	14.7%
	Increase	15.0%	13.5%	33.5%

Although aggregate profit margins were resilient to input cost inflation in 2022, there remains a minority of firms with relatively weak profit margin outcomes. 11 per cent of firms report that they are loss-making in the six months to September 2022. Chart 5 shows the share of loss-making firms in each sector. 20 per cent of Human Health firms were loss-making in mid-2022,[6] as were 14 to 15 per cent of Accommodation & Food, Administrative & Support Services, and Manufacturing firms. The lowest shares of loss-making firms are in the Construction (6 per cent) and Professional, Scientific & Technical (8 per cent) sectors. Chart 6 shows the loss-making firm share by number of employees. Loss-making rates are similar across these groups. Small firms with 10 to 49 employees reported the highest rate of loss-making (13 per cent).

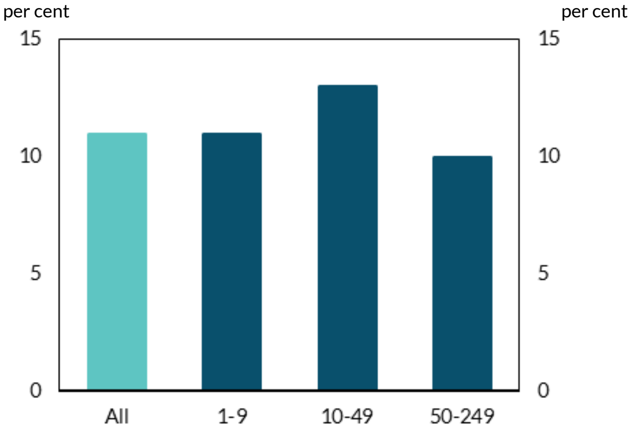
We find that high energy cost shares are not associated with loss-making. The share of operating costs spent on energy is 10 per cent for loss-makers and 11 per cent for profitable firms. Finally, loss-makers raised their unit prices by 4 per cent on average, compared with 7 per cent on average for profitable firms. This may suggest that loss-making firms faced more constraints in passing higher costs onto customers.

Chart 5: Loss-making is most common in the Human Health sector



Source: SME Credit Demand Survey
Notes: The share of firms with profit margins below zero in the period April to September 2022 by sector.

Chart 6: Loss-making does not vary significantly by firm size



Source: SME Credit Demand Survey
Notes: The share of firms with profit margins below zero in the period April to September 2022 by employee count.

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[6] The median gross profit margin in the Human Health sector is relatively low compared with other sectors, as has been previously documented in McCann et al. (2023).

3 A simulation exercise of profitability and distress in 2023

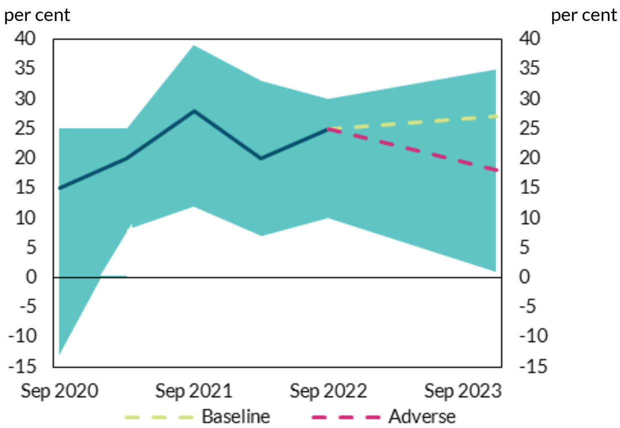
We next conduct a simulation analysis where we study SME profitability under a baseline scenario consistent with the 2023Q1 Quarterly Bulletin published by the Central Bank of Ireland and an adverse scenario consistent with the 2023 EBA Stress Test. This builds on the microsimulation framework described in McCann et al. (2023).

We take the firm-level survey data as at September 2022 as our starting point. We then project forward key income statement metrics to December 2023 using a combination of observed outcomes into early 2023 and published scenario outcomes from the Central Bank of Ireland and EBA. In our baseline scenario, we assume that turnover increases by 7.4 per cent (in line with projected Modified Domestic Demand growth), that energy costs increase by 11 per cent, raw material costs increase by 4.3 per cent (in line with growth in HICP excluding energy), and labour costs increase by 6.4 per cent. In our adverse scenario, we assume that turnover decreases by 1.3 per cent (in line with EBA output growth), energy costs increase by 17 per cent, raw material costs increase by 7 per cent, and labour costs increase by 8 per cent. This calibration generates a stressed scenario in which demand slumps and energy costs pick up again.

Profit margins are resilient under our baseline scenario. Chart 7 shows that average margins would increase modestly from 25 per cent in September 2022 to 27 per cent in December 2023. However, SME profit margins remain sensitive to a slump in consumer demand. Under our adverse scenario, average gross profit margins would fall from 25 per cent to 18 per cent in 2023.

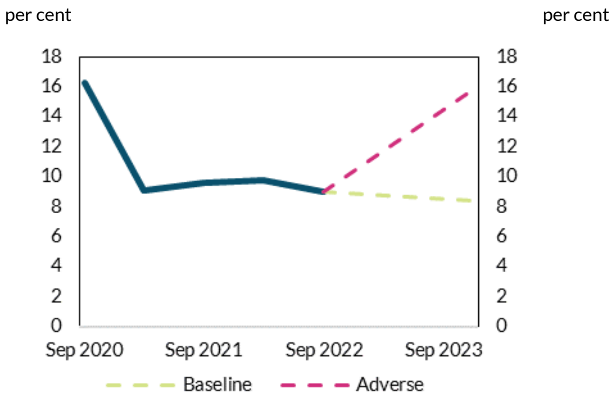
The share of firms making material losses is stable under our baseline scenario, but rises under our adverse scenario. Chart 8 shows that, under our adverse scenario, the share of firms with profit margins of -5 per cent or less would rise from 9 per cent in September 2022 to 16 per cent in December 2023. While this is a similar level to that observed in 2020, at that time the government was providing SMES with substantial pandemic-related financial supports (McCann et al., 2023).

Chart 7: Profit margins rise slightly in the baseline scenario and fall in the adverse scenario



Source: Central Bank of Ireland; CSO; EBA; SME Credit Demand Survey
Notes: Average observed profit margin up to September 2022 and simulated margins under Baseline and Adverse scenarios consistent with the Central Bank of Ireland's Quarterly Bulletin and EBA stress test adverse scenario, respectively. The shaded range shows the minimum and maximum outcome by sector observed to September 2022 and under the baseline scenario.

Chart 8: Material loss-making remains stable in the baseline scenario and rises in the adverse scenario



Source: Central Bank of Ireland; CSO; EBA; SME Credit Demand Survey
Notes: A firm is defined as making material losses if it has a profit margin of -5 per cent or lower. Observed data up to September 2022 and simulated margins under Baseline and Adverse scenarios consistent with the Central Bank of Ireland's Quarterly Bulletin and EBA stress test adverse scenario, respectively.

Our results demonstrate the vulnerability of firms to a slump in consumer demand, particularly in the context of elevated costs. Given the declining real incomes and savings of households, and the potential for interest rates to remain at higher levels, there remains significant uncertainty about the ability of firms to maintain profit margins by passing on cost rises to consumers. Our simulation demonstrates that a general downturn or slump in demand would affected profit margins significantly.

4 Conclusion

The trading performance of Irish SMEs has thus far proven resilient in the face of significant cost inflation. We show that turnover increased in 2022 across all business sectors, as firms generally passed on higher costs to customers. Price increases and strong consumer demand enabled firms to maintain or even increase their profit margins. More recent aggregate data show that unit price increases continued into early 2023 and that retail sales volumes continue to hold up.

Using a simulation analysis, we show that gross profit margins are expected to remain stable under our baseline projections consistent with the Central Bank of Ireland's 2023Q1 Quarterly Bulletin. While recent trading performance has been strong, firm profit margins would remain vulnerable to a slump in consumer demand, particularly in the context of persistent cost pressures. We present simulation evidence on how firms would perform under an adverse scenario consistent with the 2023 EBA stress test. We find that average gross profit margins would fall from 25 to 19 per cent.

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