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Bank for the Accounts of Companies Harmonized

OUTLOOK
11

The Impact of the Covid-19 Pandemic on European Firms

(November 2022)



Abstract

Outlook #11, entitled "The Impact of the Covid-19 Pandemic on European Firms", utilizes BACH data from 12 European countries (Austria, Belgium, Czech Republic, Germany, Luxembourg, Spain, France, Croatia, Italy, Poland, Portugal and Slovakia) to assess the impact of the Covid-19 Pandemic on non-financial corporations.

The aim is to highlight the main patterns observed throughout Europe yet disentangle the pandemic's heterogeneous effect across sectors. To present a comprehensive analysis, we consider both the asset-capital and the income-cost structure of European corporations.

We first explored the developments in the balance sheet of firms across Europe in the last two decades. Second, we categorized country-specific sectors depending on their ex-post exposure to the pandemic, measured as the percentage change in turnover between 2020 and 2019. Using this subdivision, we examine the common patterns observed across countries in firms' balance sheets.

Our findings show how i) sectors that were most affected by the pandemic increased their financial debt ratio and decreased their capital ratio, in stark contrast with resilient and winner sectors; ii) the most affected activities saw their trade payables and receivables ratios over net turnover increasing significantly as a consequence of their sharp turnover decrease, while the same ratios over total balance sheet decreased for all activities, signalling that firms could adapt their trade credits and debits to the lower turnover levels in 2020; iii) the profitability ratios of companies operating within sectors highly hit by the pandemic declined significantly in all countries; iv) the pandemic led to widespread employment reductions, and a higher cost per worker over gross value added (GVA); v) there was a significant general increase in firms' cash holdings, stressing the already markedly sharp rise in cash hoard by firms after the Global Financial Crisis.

Disclaimer

This analysis is based exclusively on BACH data. Therefore, the evidence provided reflects the different national samples used to calculate BACH data and might differ from other sources. More information regarding methodological limitations and national sample specificities can be found on the BACH website. The opinions of the authors of this document do not necessarily reflect those of the national central banks to which they are affiliated or those of the ECCBSO.

FOREWORD

The European Committee of Central Balance-Sheet Data Offices (ECCBSO) is an informal body whose members consist of experts either from the Central Balance-Sheet Data Offices belonging to or associated with the National Central Banks of the European Community or from National Statistical Institutes.

The Bank for the Accounts of Companies Harmonized Working Group (BACH WG) is one of ECCBSO's Working Groups. It was created within the foundation of developing and improving a European statistical database: the BACH database.

The BACH Database provides comparable aggregated data (both economic and financial) based on the annual accounts of non-financial incorporated companies from European countries. Freely available, BACH includes data from 12 countries: Austria, Belgium, Czech Republic, Germany, Spain, France, Croatia, Italy, Luxembourg, Poland, Portugal and Slovakia.

We sincerely hope you can benefit from this analysis, and we invite you to visit the BACH database and explore it as much as possible by making your own analysis. Do not hesitate to share your results with the BACH WG.

INTRODUCTION

The Covid-19 pandemic completely paralyzed Europe in 2020. Most countries announced general lockdowns, and companies in several non-essential sectors had to close. On top of this, the global supply chain slowed down considerably, and goods and production inputs became scarce.

Outlook #11 examines the impact of the Covid-19 pandemic on the balance sheet and income statements of non-financial corporations across Europe, disentangling the pandemic's heterogeneous effect across sectors.

We show how the pandemic restrictions led to the generalized plummeting of income flows across countries and interrupted ongoing positive economic trends such as increasing value-added and EBT margins and decreasing debt ratios. We further show how heterogeneous the effects of the pandemic were across economic sectors. While some sectors showed strong resilience on the verge of economic turmoils, others were adversely impacted and became dependent on additional debt to overcome cash flow disruptions. Increased debt dependency made more or less favourable financing conditions and Government support key factors in allowing the most adversely impacted companies across Europe to endure the pandemic effects. Furthermore, by classifying combinations of economic activities by their ex-post exposure to the pandemic, we shed light on the joint developments in the balance sheet and income statements of similarly impacted activities across countries. The analysis is divided into four main parts: first, we assess the health of European companies by examining trends in the last two decades, highlighting the severe impact of both the Financial Crisis and Sovereign Debt Crisis; second, we discuss the industrial composition in Europe at the onset of the pandemic and split sectors according to their ex-post exposure; third, we disentangle the impact of the Covid-19 pandemic on the balance sheet of non-financial corporations and illustrates how severely affected sectors show similarities across countries; the last section concludes.

DATA DESCRIPTION AND METHODOLOGY

The Bank for the Accounts of Companies Harmonized - BACH is a database with aggregated and harmonized economic and financial information for non-financial firms from 12 European countries: Austria (AT), Belgium (BE), Croatia (HR), Czech Republic (CZ), France (FR), Germany (DE), Italy (IT), Luxembourg (LU), Poland (PL), Portugal (PT), Slovakia (SK) and Spain (ES).

The BACH Database is managed by the European Committee of Central Balance-Sheet Data Offices (ECCBSO). The ECCBSO is an informal body of experts from National Central Banks and National Statistical Institutes of Europe. Under the aegis of the ECCBSO, the BACH Working Group is responsible for maintaining and improving the BACH database. The BACH Database is available free of charge at <https://www.bach.banque-france.fr/?lang=en>.

SAMPLE AND COVERAGE

BACH data¹ at our disposal underrepresents micro firms and selected activities for some countries. The disaggregation by NACE section or division reduces the effect of the sample composition on the results. The BACH User guide provides a complete description of the samples.

The BACH database contains statistics on economic and financial variables covering 12 European countries. The database provides the weighted mean and quartiles aggregated by sector and size class for each financial variable. Furthermore, it provides data according to different sampling procedures. To use the inherent structure of the BACH database optimally, we employ the variable sample when performing time series analysis and the sliding sample when comparing two subsequent years, i.e. 2019 and 2020, to follow the same firms throughout the period. Breakdown details in this analysis refer to country totals (“Zc”) or NACE sections or divisions, for all sizes (“0”), by distinct BACH indicators.

WEIGHTS

Whenever we aggregate data beyond the levels present in the BACH database (country, sector, size), i.e. when grouping sectors depending on their degree of exposure to the Covid-19 pandemic, we weigh the statistics at our disposal by the corresponding share of total assets, except if stated otherwise.

The following equation gives the weights (w) and resulting weighted means (WM) of a given variable for the sectors within countries grouped by their exposure to the Covid-19 pandemic:

$$w_{e,i,c,t} = \frac{\mathbf{TotalAssets}_{e,i,c,t}}{\sum_i \mathbf{TotalAssets}_{e,i,c,t}}$$
$$\mathbf{WM}_{e,c,t} = \sum_i w_{e,i,c,t} * \mathbf{WM}_{i,e,c,t}$$

Where e defines the grouping by exposure to the Covid-19 pandemic, i stands for 2-digit NACE sector, c for country and t for the year.

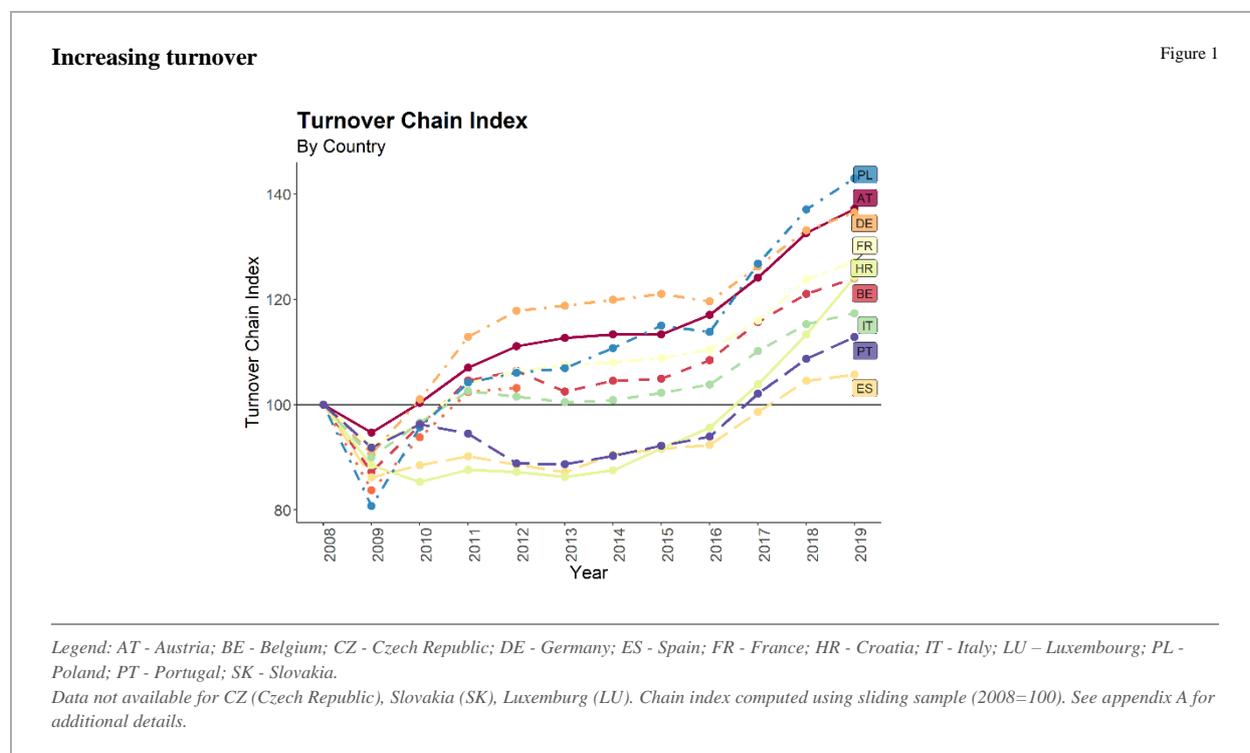
¹ Database extraction date: 31/10/2022

TRENDS AND ECONOMIC DEVELOPMENTS IN EUROPE AT THE ONSET OF THE COVID-19 PANDEMIC

Before diving into the impact of the Covid-19 pandemic on European firms, it is worthwhile to outline the main trends we could observe in Europe and determine the health status of European companies at the onset of the pandemic.

The European economy saw two disruptive, intertwined, significant events in the past two decades. A global financial crisis hit the markets in 2008, causing the freeze of the international money market and the collapse of stock exchanges worldwide. The deep-reaching effects of the financial market turmoil led to the default of over-indebted banks and caused several eurozone member states to be unable to refinance their government debt. The sovereign debt crisis that followed saw its peak in 2012 with a decisive intervention of the European Central Bank, which began a long list of monetary policy rate cuts and announced major unconventional support for all eurozone countries.

The subsequent low-interest-rate environment, paired with the sustained growth of the global financial markets after the financial crisis, made credit available to households and firms at a low cost. This eased the inflow of external funds, increased investment and caused a low yet relatively stable growth in Europe, with GDP annual growth rate averaging around 2 per cent among member states between 2012 and 2019². This upward trend is reflected in the development of firms' turnover, depicted in Figure 1.³



² World Bank Data: <https://data.worldbank.org/>

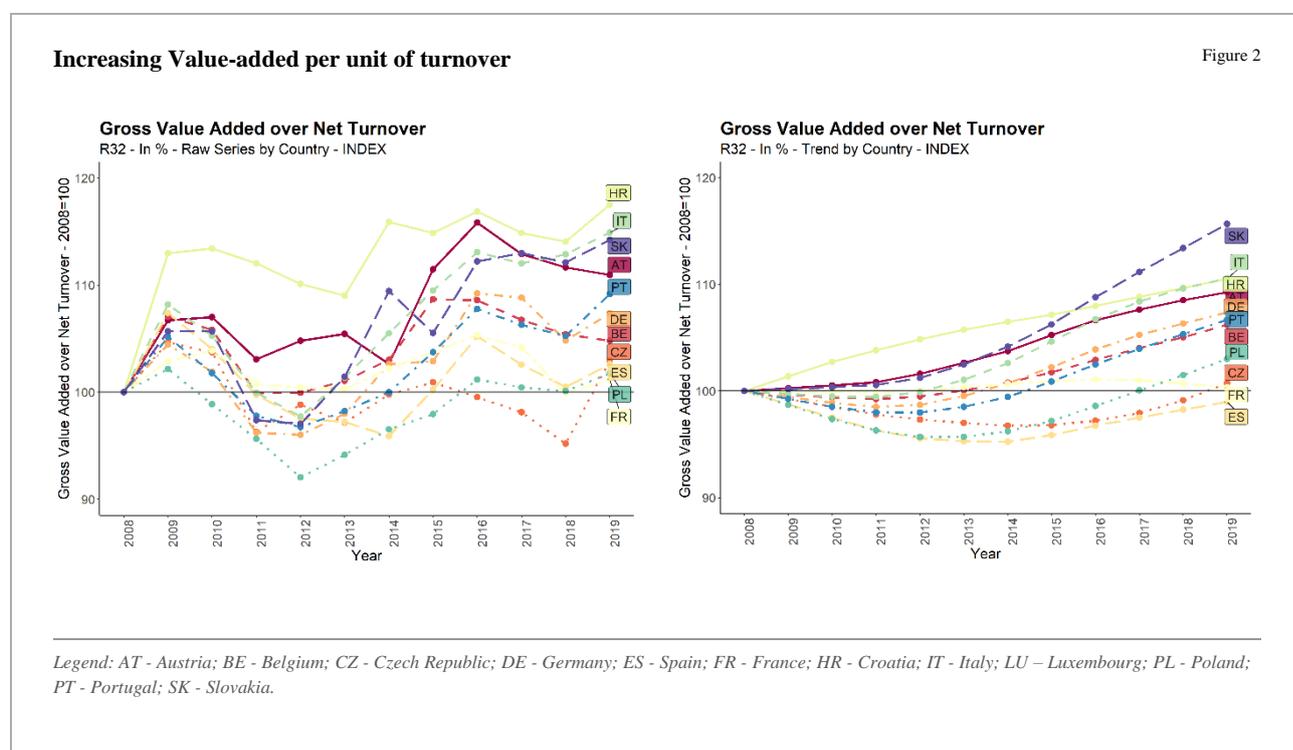
³ See appendix A for a detailed description of the chain Index computation.

WHAT HAPPENED TO EUROPEAN FIRMS?

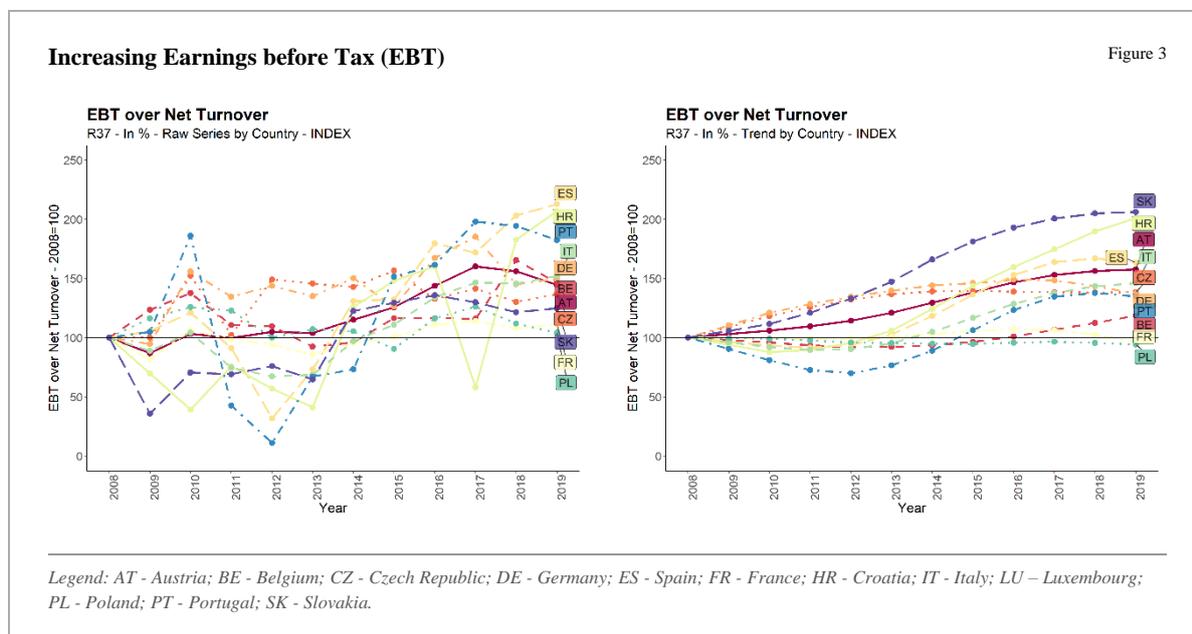
Overall, the last decade was positive for firms' profitability. Stable and low inflation, cheap credit and a booming financial market helped sustain firms' growth. In the following section, we employ historical BACH data to present a brief overview of the trends observed among European firms.

All graphs below report two sets of time series for each variable of interest: on the left is the raw data from a variable sample for each country; on the right is a simple polynomial trend to highlight developments in Europe. All data points are relative to 2008, used as the base year.

Firms have been generating higher value-added per unit of turnover. After the financial crisis in 2008, firms' profitability entered a highly volatile phase that ended only in 2013. The sovereign debt crisis mined firms' growth and slowed their recovery throughout Europe. This is shown in Figure 2, depicting firms' value-added per unit of turnover. Value-added declined from 2008 to 2012, and it was only following the end of the sovereign debt crisis that value-added started to increase again.



Earnings followed a similar upward trend. A similar pattern emerges examining earnings before taxes (EBT) over turnover, as shown in Figure 3. While the years after the global financial crisis saw a general turmoil in firms' profitability, the last decade, after 2012, has been progressing on a solid upward trend.

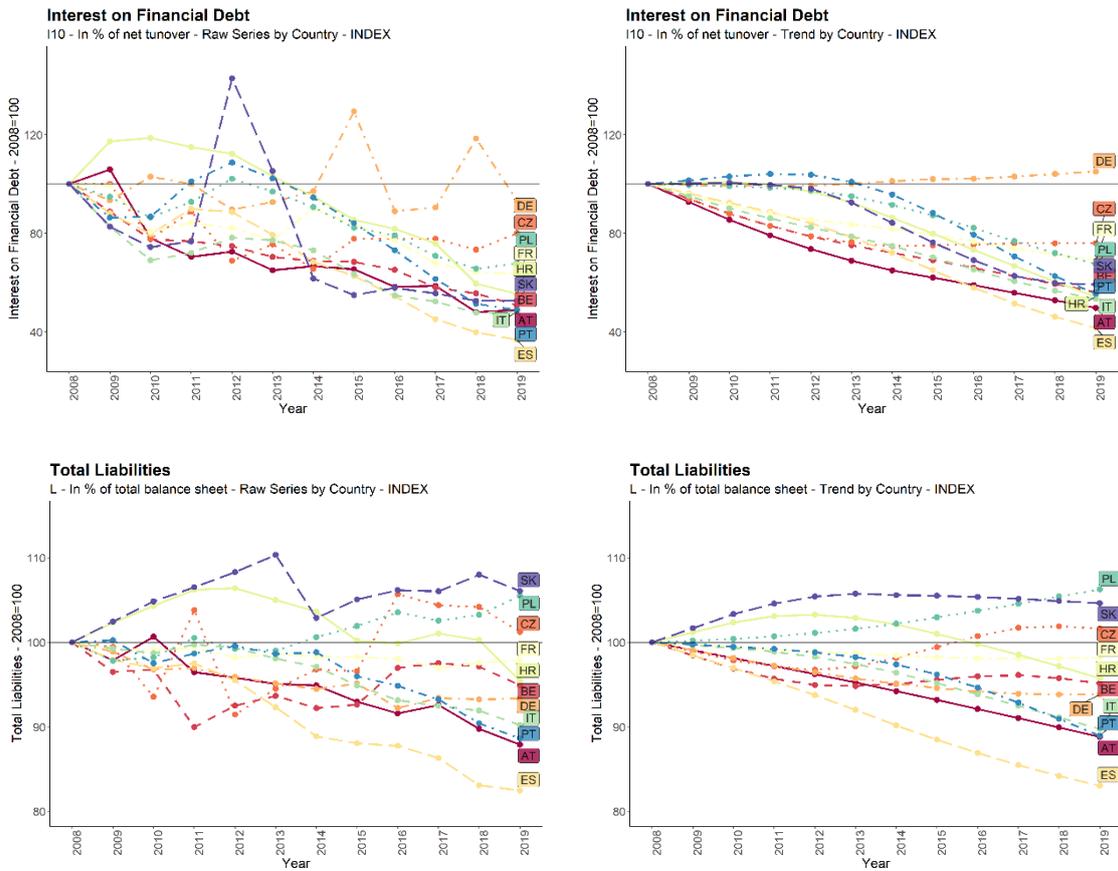


The price of credit has been declining over time, and so has firms' total debt. The low-interest-rate environment created by several monetary policy rate cuts announced by the ECB decreased the price of credit to households and firms. The total interest burden paid by firms has decreased since 2008 across all major European economies⁴. This can be observed in Figure 4, depicting total interest on financial debts. Nevertheless, a lower interest burden could capture both a lower credit cost and a lower debt level. In fact, firms have been reducing their total liabilities since the global financial crisis, despite the decreased price of credit, as shown by the bottom panels of Figure 4.

⁴ In Germany, interest expenses are also influenced by changes in the applied rate of interest on pension provisions.

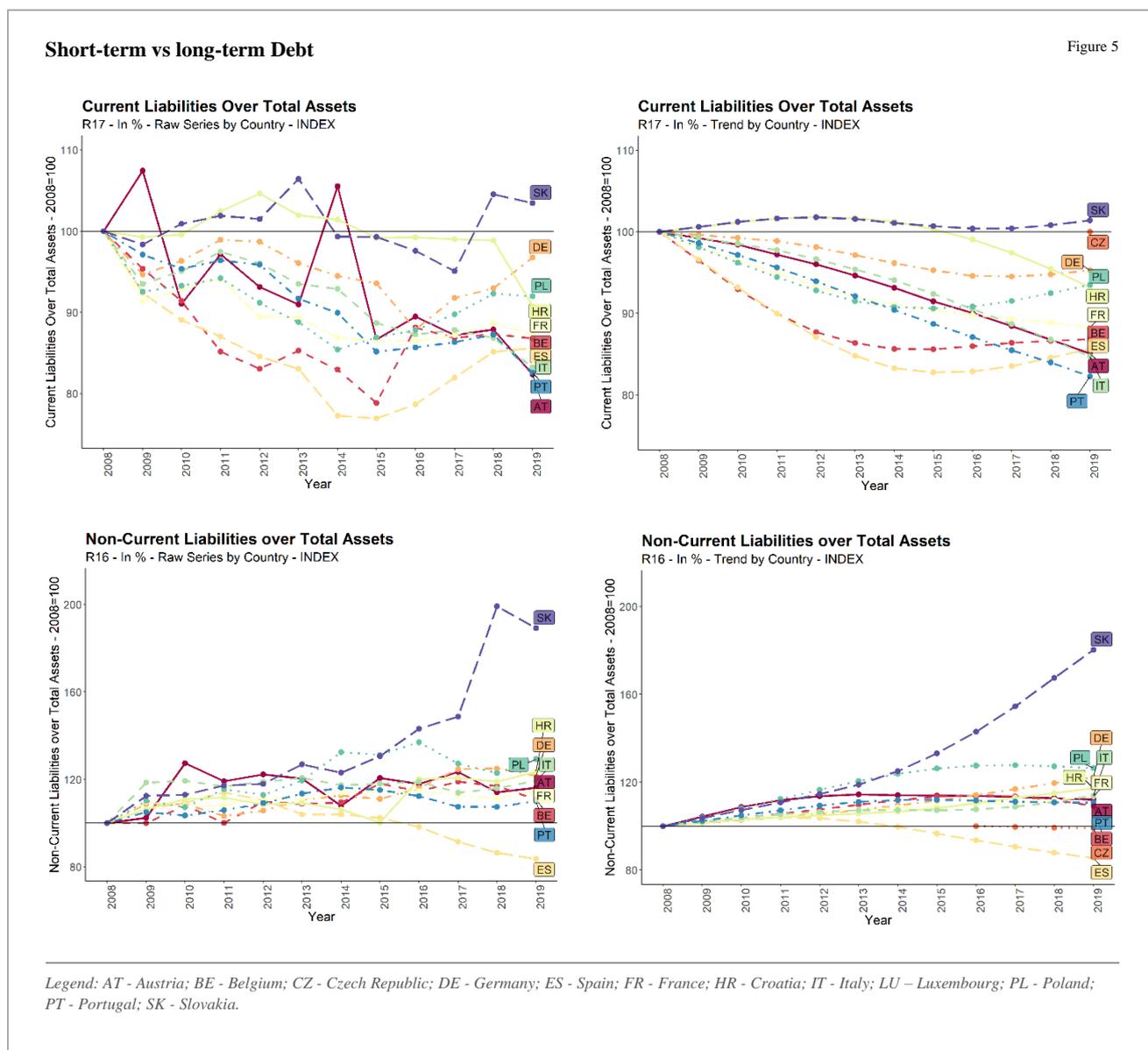
Lower debt and lower cost of debt

Figure 4



Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; LU - Luxembourg; PL - Poland; PT - Portugal; SK - Slovakia.

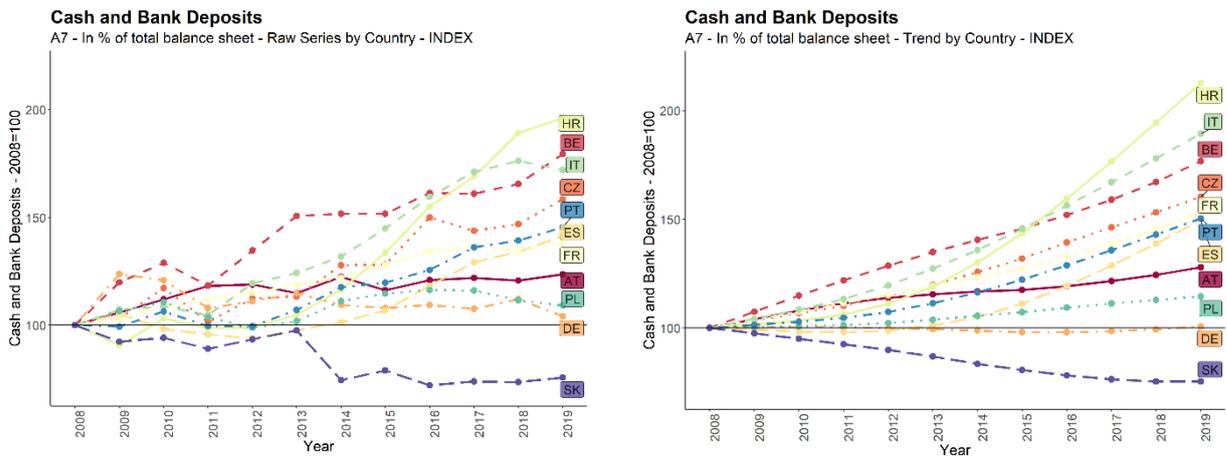
The low price of credit pushed firms away from short-term debt. As the price of credit dropped, firms preferred to increase their debt maturity over time by increasing their long-term credit share (see Figure 5). The share of current liabilities over total assets declined by around 12 per cent since 2008, while the share of non-current liabilities over total assets increased by a similar amount for most countries.



Despite the decreasing share of total liabilities, firms in most countries still accumulated a high level of cash. Across the whole of Europe, firms have been accumulating high levels of cash in bank deposits since the global financial crisis. This trend has also been observed in other developed countries like the U.S and Japan, see Graham and Leary (2018) and Adler et. Al (2017) for a broad review. Figure 6 plots the ratio of cash and bank deposits over total assets. The ratio has been growing steadily and at a relatively high pace, signalling a potential shift in firms' risk perception after the adverse consequence of the financial crisis. The increase in cash is particularly relevant given the low and often negative returns on bank deposits, which, if anything, should decrease the attractiveness of cash.

Firms have accumulated a high level of cash

Figure 6



Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; LU - Luxembourg; PL - Poland; PT - Portugal; SK - Slovakia.

THE IMPACT OF THE COVID-19 PANDEMIC

TIMING AND GEOGRAPHICAL SPREAD OF THE COVID-19 PANDEMIC

At the beginning of February 2020, due to the rapidly spreading outbreak of Covid-19 in Wuhan, China, the E.U. health ministers held the first informal high-level video conference to review the state of play concerning the newly discovered virus. Later in the month, a substantial number of Covid-19 cases were registered in Northern Italy while the European Commission shared its first assessment of the potential impact of the COVID-19 outbreak on the E.U. industry.

In March, Italy was the first country to announce a complete lockdown, followed by many European countries in the coming weeks. The interventions varied significantly across countries, both in nature and timing, and a full review is beyond the scope of this outlook. Overall, the governments aimed to avoid a potential historic surge in unemployment and support otherwise financially sound corporations. The ECB backed national intervention through a 1.850-billion-euro pandemic purchase emergency programme (PEPP) to lower borrowing costs and avoid disruption in the European credit market.⁵

WHAT WAS THE INDUSTRY COMPOSITION IN EACH EUROPEAN COUNTRY RIGHT BEFORE COVID?

The pandemic had a highly asymmetric effect across sectors. These asymmetries, paired with the fact that European countries have a highly heterogeneous industrial composition, profoundly impacted the overall degree of exposure to the Covid-19 pandemic of each member state. As a preparatory step to the analysis, this section disentangles the relative importance of each industrial sector across BACH countries in 2019, prior to the COVID-19 pandemic.

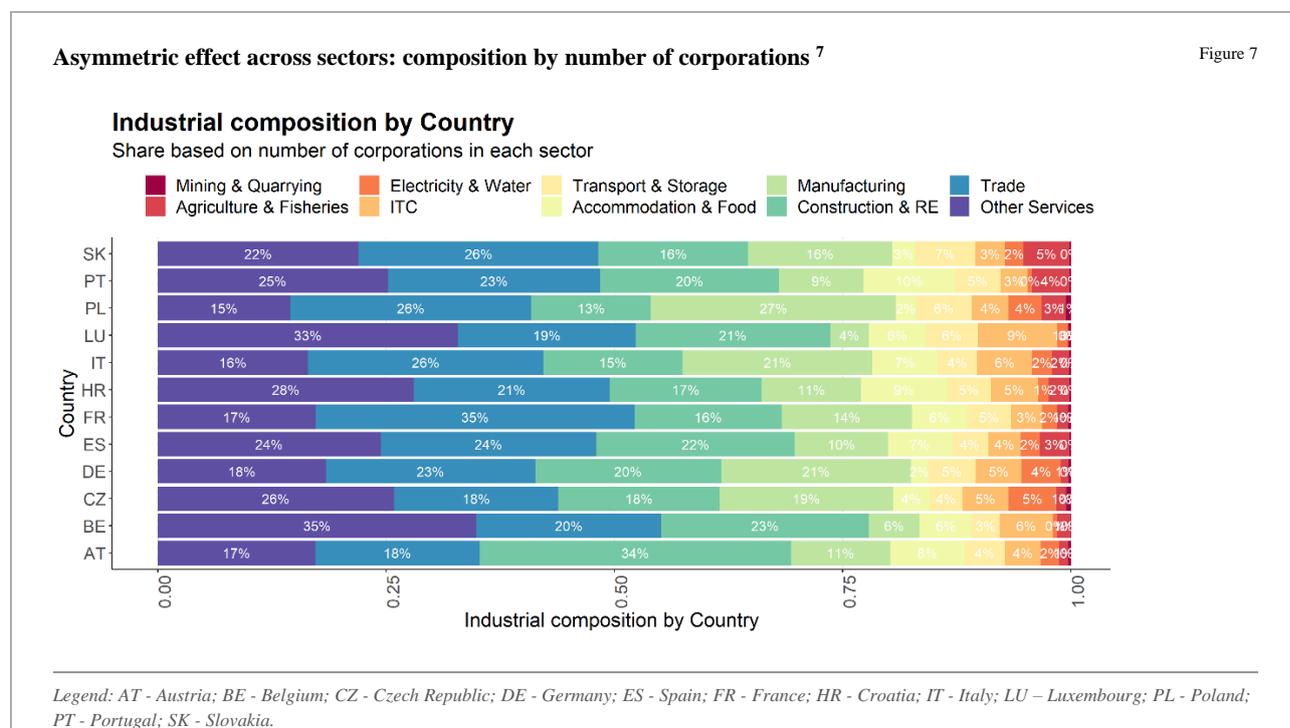
In 2019, the trade sector and the other services sector were, on average⁶, the largest by number of firms (each with 23%). Together with the construction & real estate sector (accounting for 20%) and manufacturing (14%), these sectors accounted for 80% of the total number of corporations and comprised the highest number of corporations in most countries. On the other hand, the mining & quarrying sector had the fewest companies (about 0.3%).

The share of the accommodation and food sector (by number of firms) was higher in Portugal (10%) and Belgium (5.7%) than the respective weight of the manufacturing sector (9.3% and 5.6%), in contrast with the remaining countries. Besides Portugal, Croatia (9.4%), Austria

⁵ <https://www.ecb.europa.eu/>

⁶ Unweighted average of sector composition for all countries

(8.2%), Italy (7.1%), and Spain (7.0%) showed the largest share of corporations in the accommodation and food sector (figure 7).

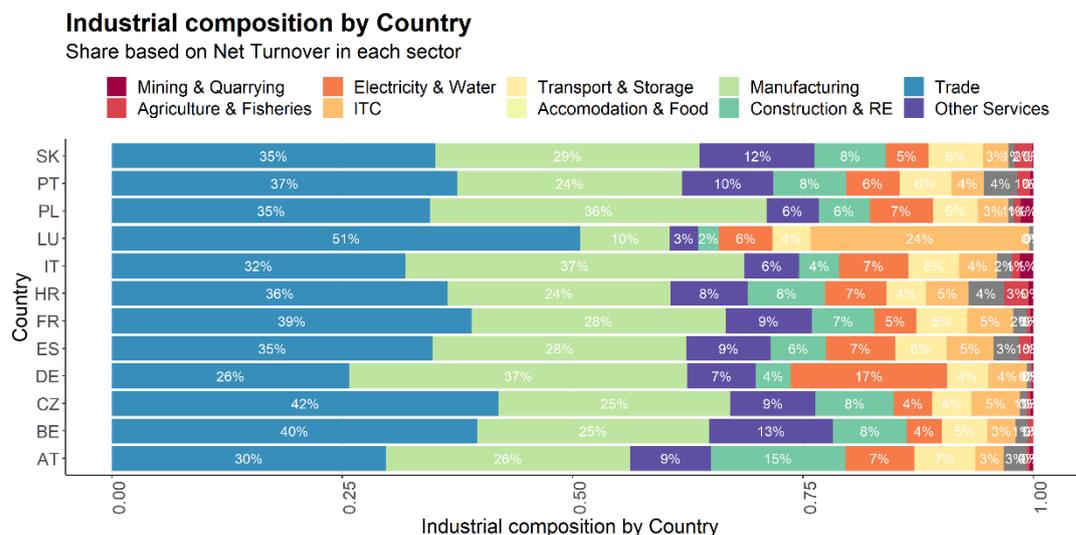


Comparing the industrial composition in terms of turnover, the trade sector remains the largest sector, comprising 36% of total turnover on average. However, the manufacturing sector showed more relevance in terms of turnover (27%) than in terms of the number of firms. By contrast, despite comprising a large portion of firms, the share of the other services sector in total turnover is less relevant (9%) (figure 8).

⁷ Note that BACH sample sector structures may differ from population sector structure. Please refer to the Userguide Chapter 2. National Samples for further details.

Asymmetric effect across sectors: composition by turnover

Figure 8

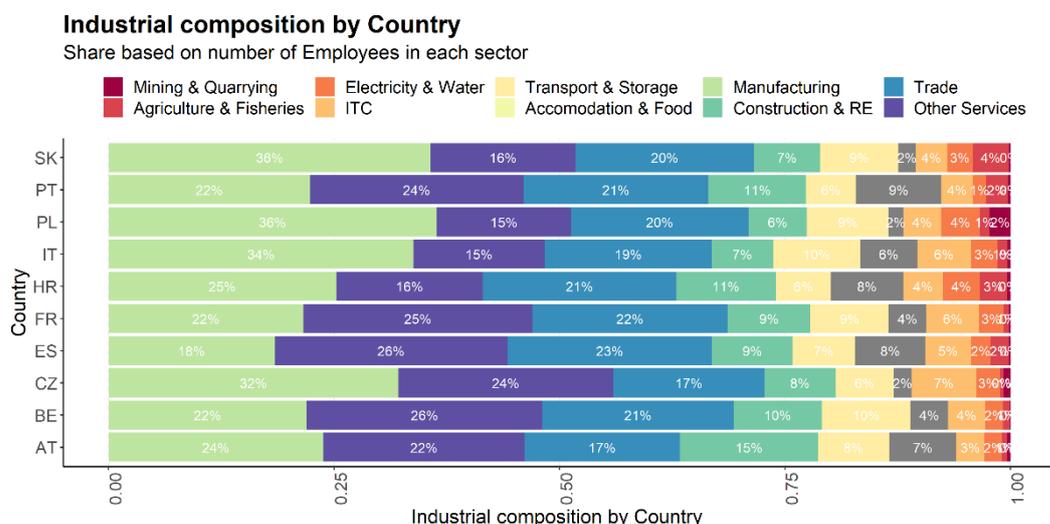


Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; LU - Luxembourg; PL - Poland; PT - Portugal; SK - Slovakia.

In terms of employees, the manufacturing sector recorded the highest percentage of average people employed (27%), followed by other services (21%), trade (20%) and construction & real estate (9%). The accommodation & food sector employed, on average, 5% of people, but it is especially relevant in the case of Portugal (9%), Croatia (8%), Austria and Spain (both with 7%) (figure 9).

Asymmetric effect across sectors: composition by number of employees

Figure 9

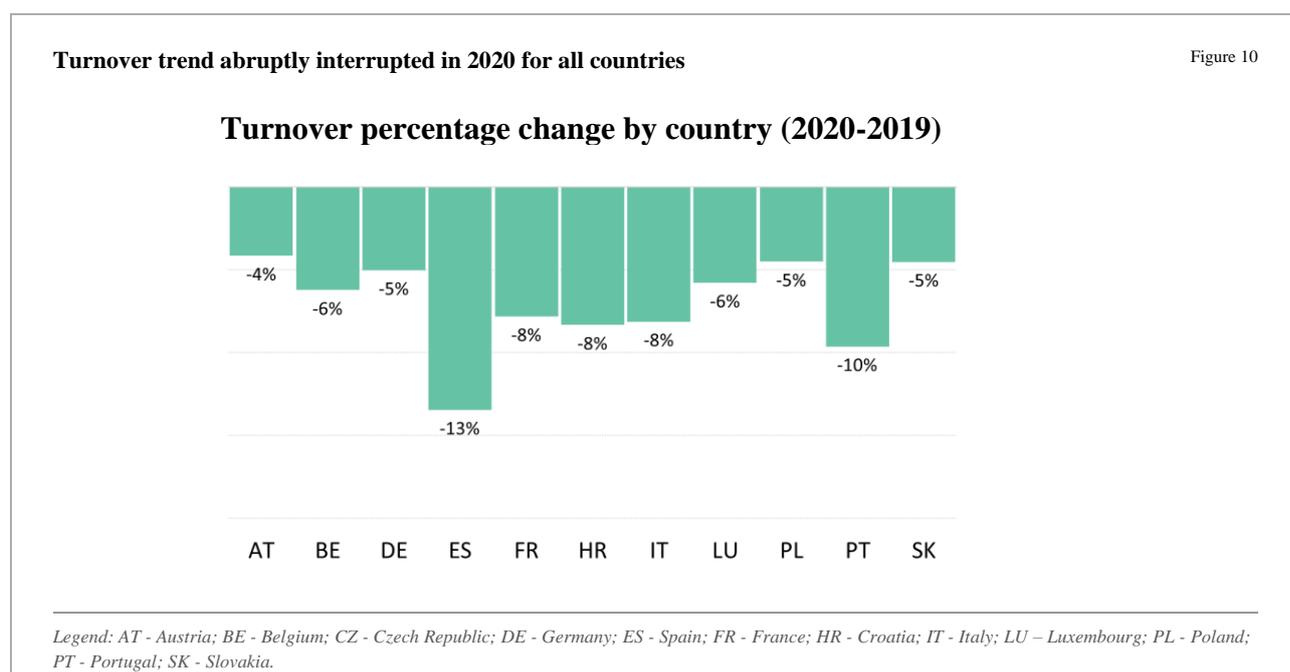


Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; LU - Luxembourg; PL - Poland; PT - Portugal; SK - Slovakia.

THE IMPACT OF THE PANDEMIC HAS BEEN HIGHLY HETEROGENEOUS

Most European firms enjoyed sustained turnover growth up to 2019, with 2019 turnover being about 25% higher on average than in 2008 (recall figure 1). This trend was abruptly interrupted in 2020 (figure 10).

The generalized pandemic effects plummeted overall 2020 firms' turnover to 2017 levels in most countries and 2014 levels in the most severe case of ES. However, these effects have differed tremendously across sectors.

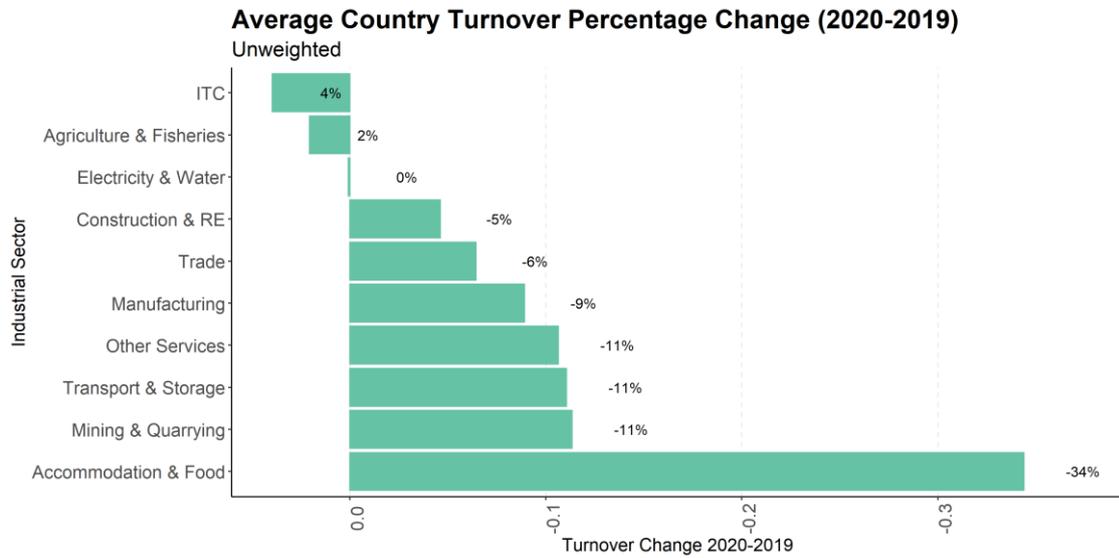


The impact of the pandemic has differed primarily across sectors of economic activity. The degree of exposure to the pandemic differed according to several factors, namely the supply chain structure and the business exposure to the consumer's drop in demand because of generalized lockdowns.

In terms of turnover, most sectors were negatively affected by the pandemic, although some showed signs of remarkable resilience: IT & communication, agriculture & fisheries and electricity & water. On the other hand, the accommodation & food sector stood out as the most impacted sector by the pandemic (figure 11).

The magnitude and direction of these effects have been similar across countries, although some outliers, such as construction & real estate in Germany or IT & communication in Belgium and Luxemburg, stand out (figure 12).

Figure 11



Countries considered for average computation (unweighted) (sliding sample): Austria (AT), Belgium (BE), Croatia (HR), France (FR), Germany (DE), Italy (IT), Poland (PL), Portugal (PT), Slovakia (SK), Luxemburg (LU), and Spain (ES).

Figure 12

Turnover percentage change by sector, country (2020-2019)



Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; LU - Luxembourg; PL - Poland; PT - Portugal; SK - Slovakia.

TECHNICAL NOTE: METHODOLOGY FOR GROUPING BY EXPOSURE TO THE PANDEMIC

In the following sections, we divide economic activities at the NACE division level into three separate groups: most affected, resilient and winner activities.

The previously filtered data comprises size class 0 (all sizes) and the sliding sample 2019 (-1) and 2020 (+1), reflecting a comparable set of entities throughout the period.

To classify activities into each pandemic exposure group, we ordered the set of all combinations of countries and economic activities by turnover change (2019 to 2020 percentage change) from lowest to highest values and computed the respective quartiles of the distribution.

We then classified each activity as follows:

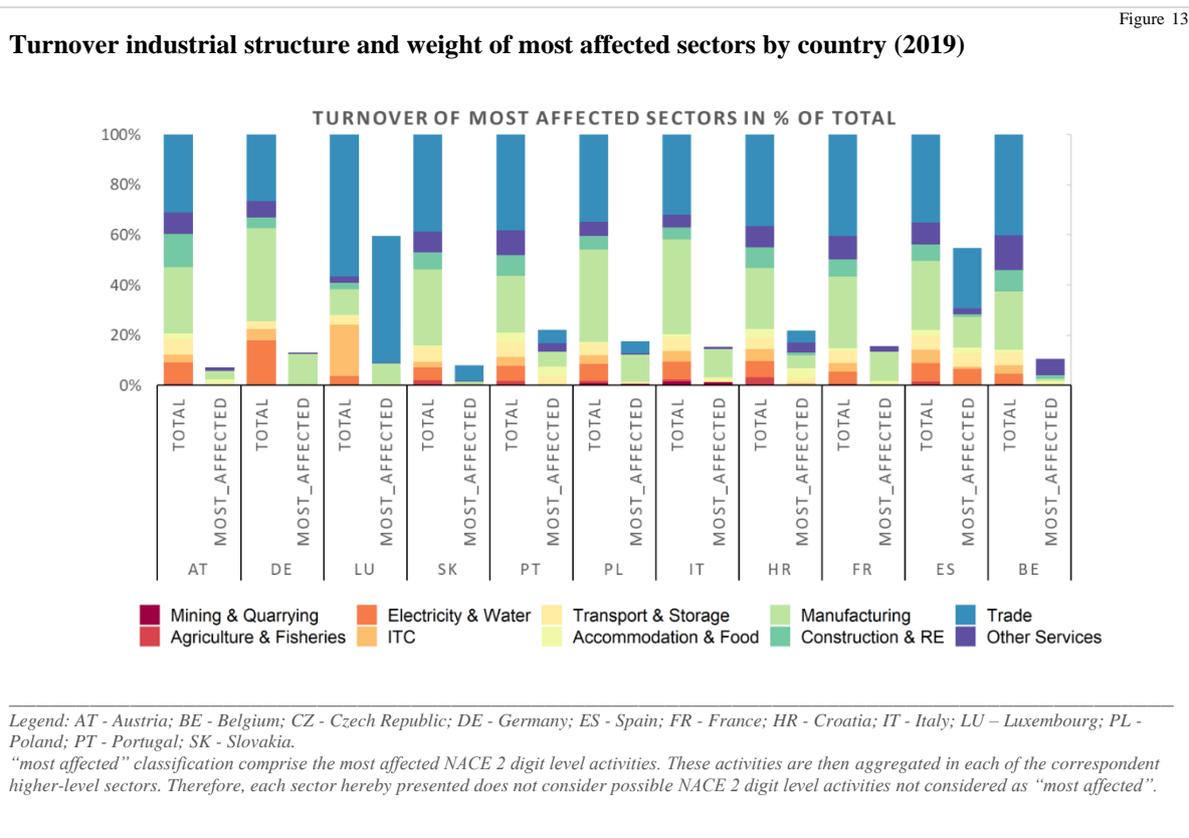
- **Most affected activities:** those activities for which turnover change \leq 1st quartile.
- **Resilient activities:** those activities for which turnover change $>$ 2nd quartile and turnover change \leq 0.
- **Winner activities:** those activities for which turnover change $>$ 0.

Activities for which 1st quartile $<$ turnover change \leq 2nd quartile, that can be labelled as “slightly affected” or “somewhat resilient” activities, represent midpoints and are not considered for the pandemic exposure classification.

Whenever we aggregate data by classification and indicator in the following sections, we weigh the statistics at our disposal by the corresponding share of total assets (see previous “Weights” methodological section for more details about the weighting procedure).

Ultimately, the impact of the pandemic on each country depended on the industrial economic structure seen before, as countries more reliant on the most impacted activities, such as accommodation & food, suffered more.

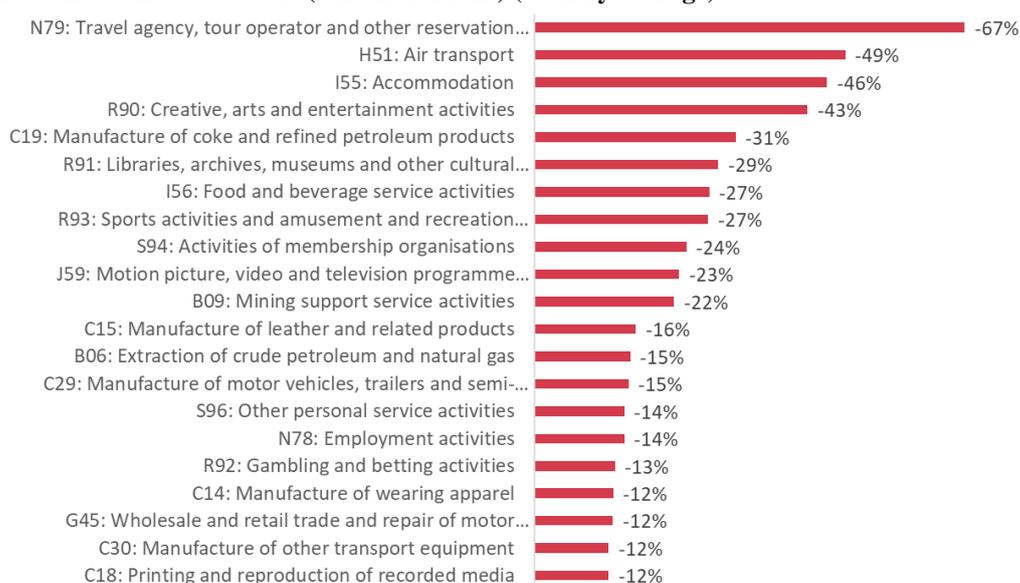
This is depicted in the following figure, which presents the turnover of the most affected sectors as a percentage of total turnover for each country (figure 13). The first bar of each country, which sums up to 100%, shows the industrial decomposition by turnover percentage. The second represents the overall weight of the most affected sectors based on the methodology presented above (see technical note).



Within each industry, there was a large turnover change variability for specific sub-sectors, defined as NACE divisions within each industrial aggregation. On average, the most affected sub-sectors were travel agency activities (N79), air transport (H51), hospitality and restaurant-related activities, creative, arts and entertainment (R90), in addition to several manufacturing-specific industries (figure 14).

Figure 14

Top 25 % most affected sectors (NACE divisions) (country average)

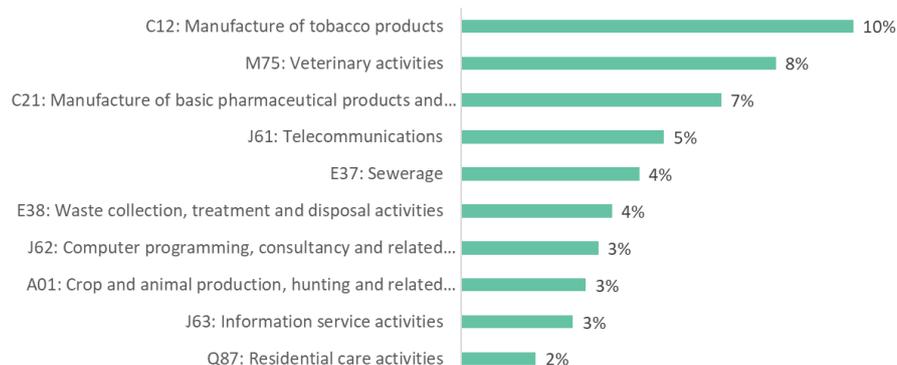


Countries considered for average computation (unweighted) (sliding sample): Austria (AT), Belgium (BE), Croatia (HR), France (FR), Germany (DE), Italy (IT), Poland (PL), Portugal (PT), Slovakia (SK), Luxemburg (LU), and Spain (ES).

Despite a general plummeting of turnover across most industries, specific sub-sectors managed to increase turnover, such as the manufacture of tobacco products (C12), veterinary activities (M75) and manufacturing activities related to pharmaceutical products, in addition to telecommunications (J61), among other activities (figure 15).

Figure 15

Top 10 winner sectors (NACE divisions) (country average)



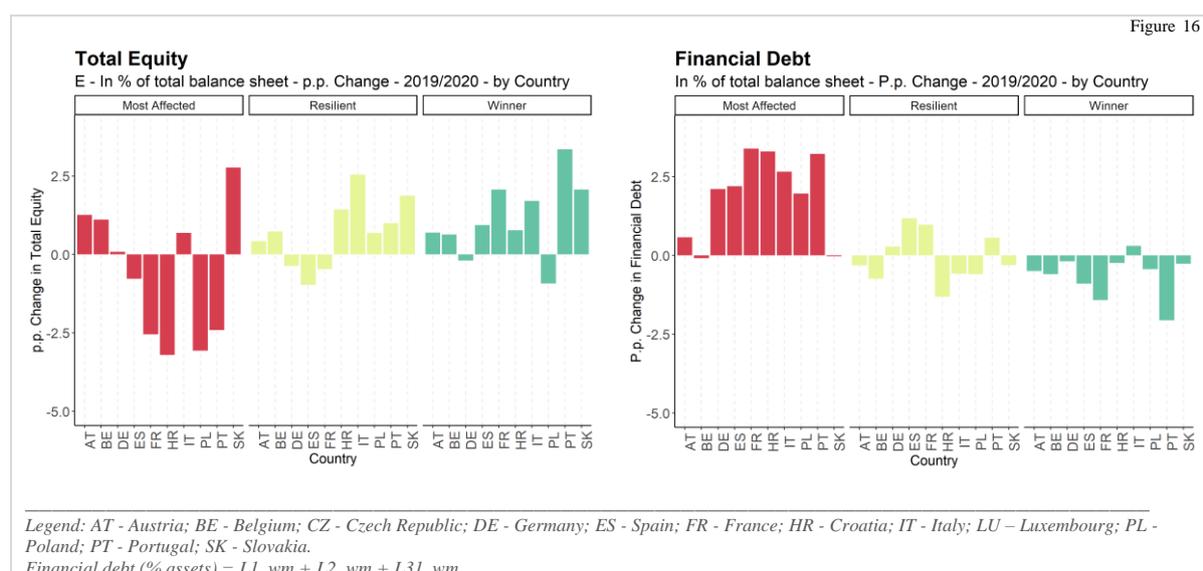
Countries considered for average computation (unweighted) (sliding sample): Austria (AT), Belgium (BE), Croatia (HR), France (FR), Germany (DE), Italy (IT), Poland (PL), Portugal (PT), Slovakia (SK), Luxemburg (LU), and Spain (ES).

Winner sectors defined as NACE division sector * country combinations for which turnover change was positive during 2020 (sliding sample).

AFFECTED SECTORS SHARE SIMILARITIES ACROSS COUNTRIES

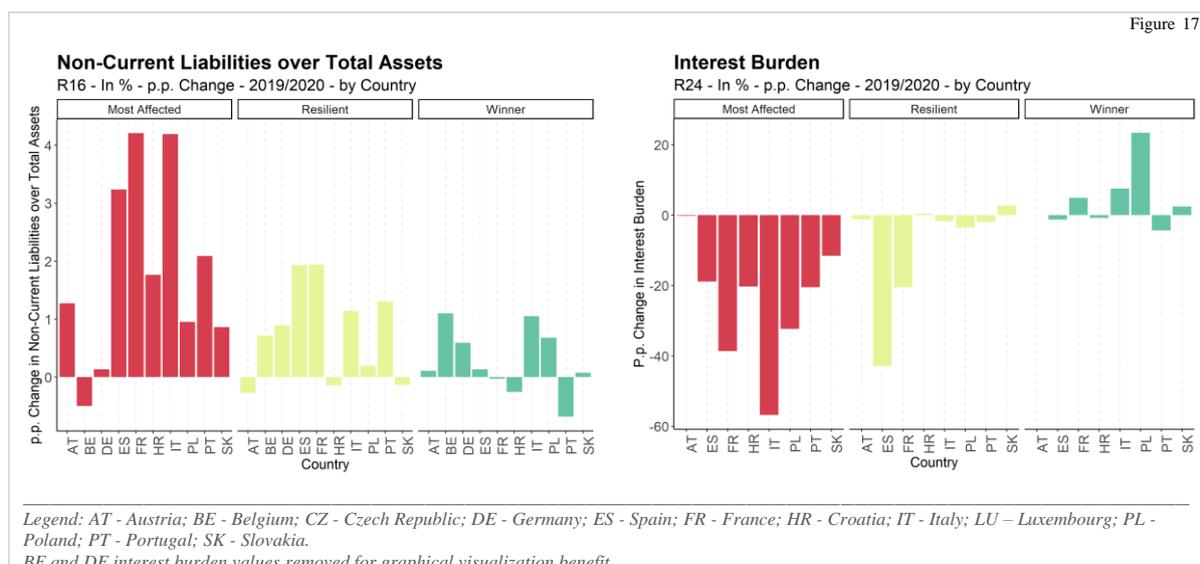
As seen previously, until the onset of the pandemic, most countries tended to increase gross value added, decreasing the liability share on total assets while benefiting from lower borrowing costs. In 2020, the pandemic halted these trends in the most affected sectors. However, in general, resilient and winner sectors for most countries behaved considerably differently from the formers regarding their financial structure flexibility capacity.

The most affected sectors increased their financial debt ratio and decreased their capital ratio, in stark contrast with more resilient sectors. For many countries, the most affected group of activities' equity ratio decreased considerably, except for Slovakia, Austria, Italy, and Belgium (and Germany to some extent) (figure 16). Due to the liquidity constraints caused by the pandemic, affected activities in all countries incurred higher financial debt ratios. In contrast, apart from Italy, winning sectors could decrease the financial debt share on total assets, maintaining the trend observed in the past.



The increased financial debt ratio appears to have been fuelled mainly by longer-term debt, as the non-current liabilities ratio kept the past increasing trend observed before the pandemic (figure 17). Nevertheless, the non-current liabilities share on assets increased most significantly for the most affected group of activities, with Belgium being the only exception.

Figure 17



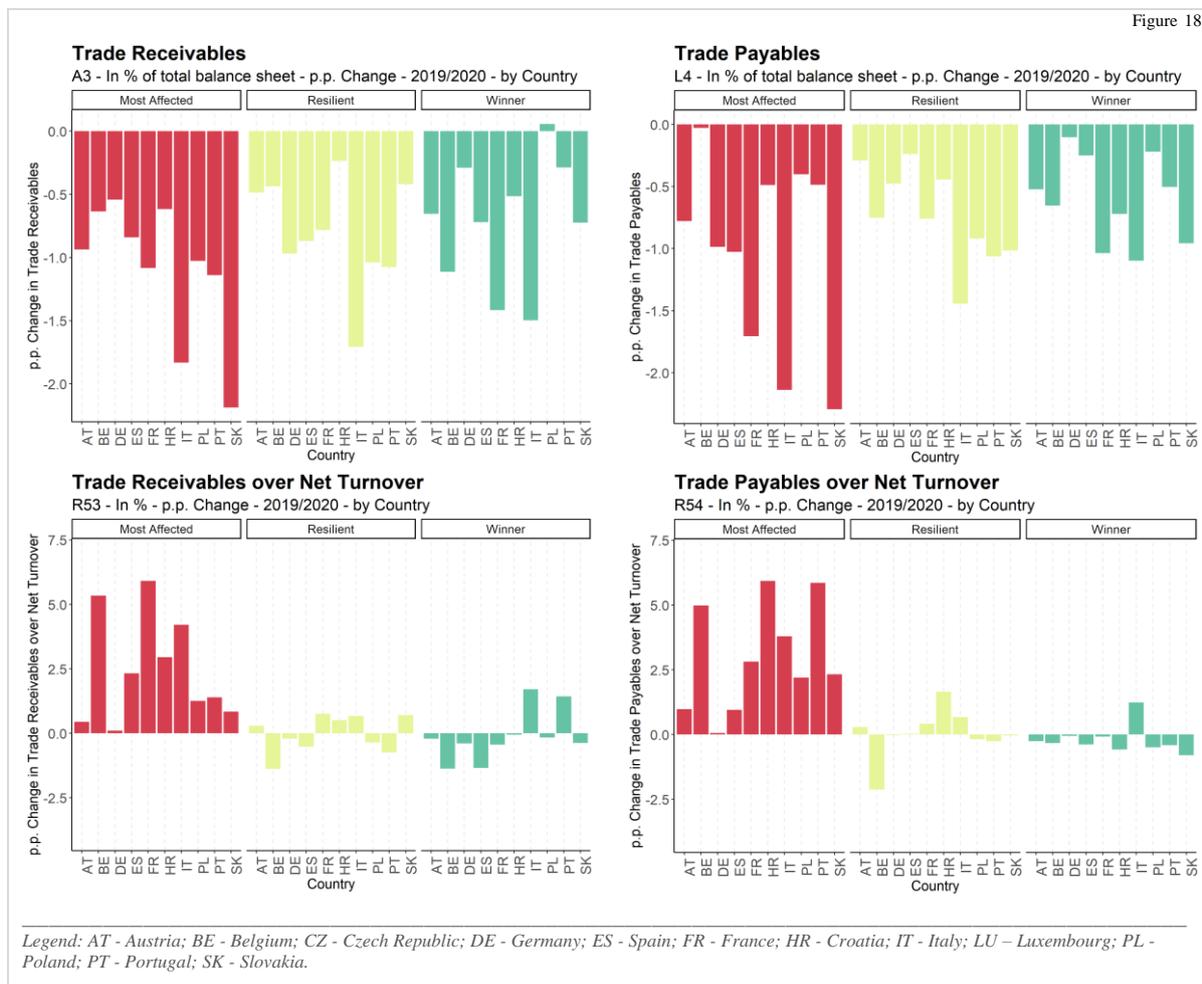
Trade receivables and trade payables decreased across all countries and sectors, yet the decrease was sharper in sectors most affected by the pandemic. A significant decrease in net turnover in most affected sectors was mirrored by a drop in trade receivables across all sectors due to a general decrease in trading volumes and economic slowdowns. Trade payables experienced similar behaviour.

The most significant drop in trade receivables among affected sectors was recorded in Slovakia and Italy, while the smallest drop was observed in Germany, Croatia and Belgium. Trade payables recorded the highest decrease across affected sectors in Slovakia, Italy and France (figure 18).

The similar magnitude of changes in both trade receivables and trade payables suggest that corporations within most countries did not suffer from any unsustainable liquidity issues. Despite the decrease in trading volumes, companies managed to maintain their operating liquidity positions by balancing the collections of trade receivables and servicing their trade payables. While days in account receivable and days in account payable⁸ increased for the most affected sectors mainly due to a larger decrease in sales compared to the decrease in trade receivables and payables, the resilient and winner sectors managed to maintain stable collections and settle trade payables at the levels of 2019 (see bottom graphs in figure 18).

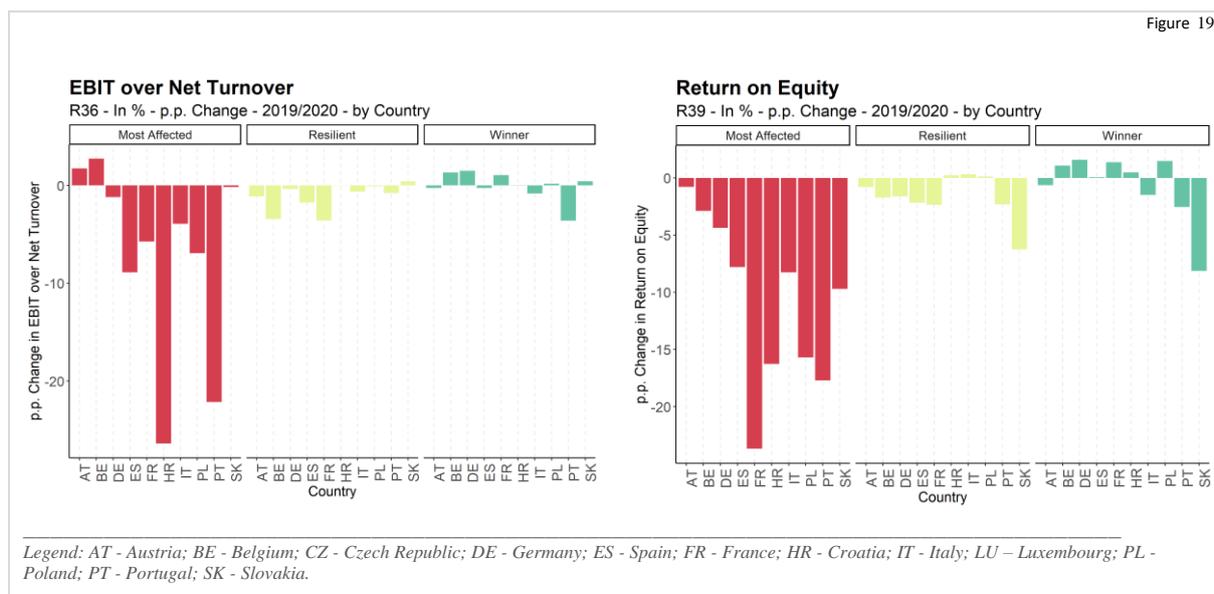
⁸ (Trade receivables or trade payables over net turnover) * 365 respectively

Figure 18



The profitability ratios of companies operating within sectors highly hit by the pandemic declined significantly in all countries. Affected sectors in Croatia and Portugal reduced their profit margins by more than 20 pp, and equally significant was the drop in return on equity for the most affected sectors in France and Poland (figure 19). The higher the operating leverage (the share of fixed over variable costs), the more sensitive the profit margin is to a decrease in sales. Adjusting a business model to large shocks like a pandemic requires structural changes, which do not materialize in the short run⁹.

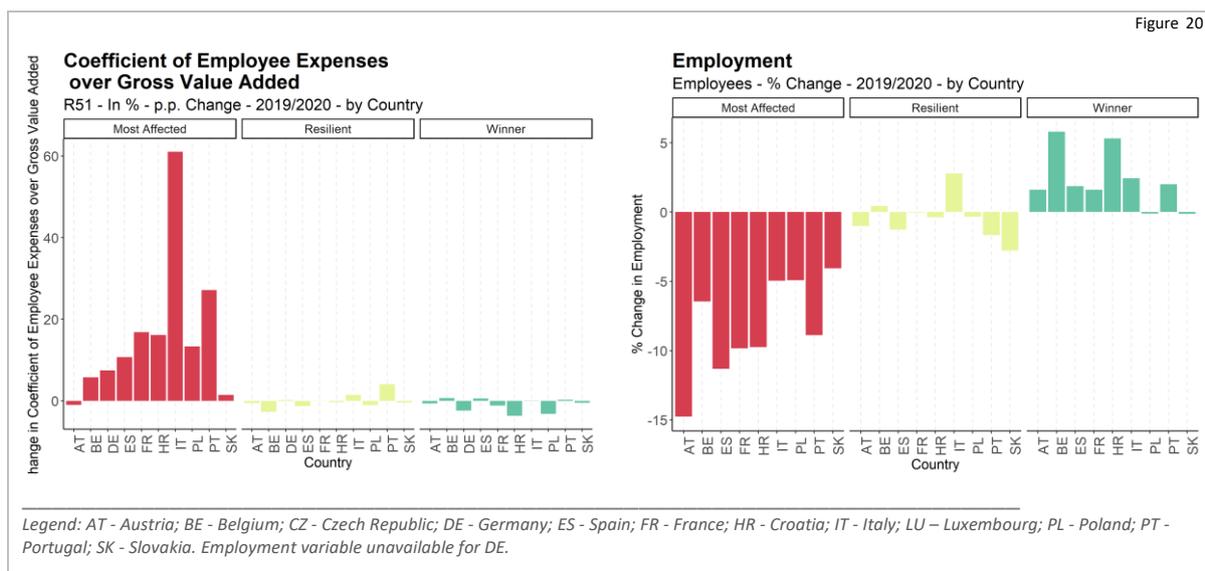
⁹ Note that both the profit margin based on EBIT and net income consider, among other variable and fixed costs, amortization and depreciation, which are considered fixed costs.



The Covid-19 pandemic led to widespread employment reductions¹⁰, and a higher cost per worker over gross value added (GVA). The employee expenses per GVA unit increased by more than 10 pp across severely impacted sectors of most countries while remaining stable in resilient sectors. The decrease in GVA is the primary driver of the relative increase in employee cost per GVA, and it would have been even higher had the sectors most affected by the pandemic not reduced their labour force (figure 20). The drop in employees among these sectors is primarily a consequence of not hiring seasonal workers instead of firing full-time employees, as most of the job prevention measures were at the disposal of firms throughout the period. Although the coefficient of employee expenses over GVA ratio surged in the most affected activities for most countries, the drop in GVA is the main reason for its increase¹¹. The example of Italy shows a high employee retention rate in the most affected sectors (a mere 5% of employment reduction), although the corresponding coefficient of employee expenses over GVA ratio surged 60 pp, signalling the drop in GVA is the main reason for its increase.

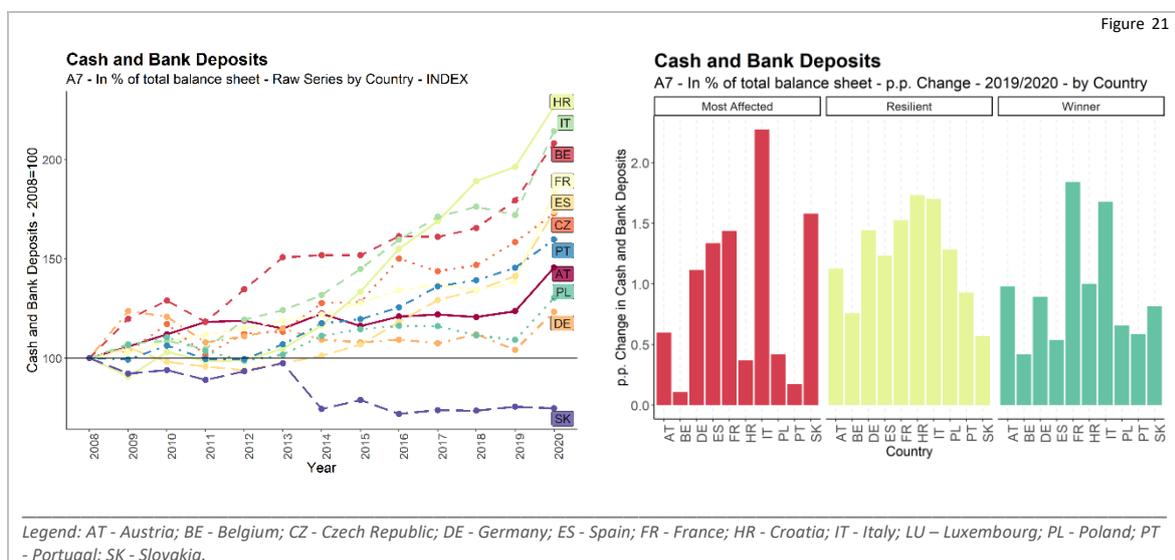
¹⁰ Please note there could be different Government support schemes affecting employee numbers and expenses, for instance the treatment of furloughed workers.

¹¹ Please note that employee expenses are not considered for GVA computation.



Firms faced the pandemic with significant cash buffers yet kept accumulating a large amount of cash even though their financial debt increased. European firms have started hoarding an increasing amount of cash since the Financial Crisis, with 2019 firms' cash ratio in most countries nearly doubling compared to their 2008 level. We have highlighted this in figure 6, showing how firms faced the start of the Covid-19 pandemic with significant cash buffers and a relatively low level of debt.

Usually, cash hoarding is pro-cyclical, meaning that firms hoard cash buffers in good times and erode them in bad times. It is, therefore, worth noting that, regardless of the degree of exposure to the pandemic and the higher level of indebtedness of severely hit sectors (figure 16), we observe firms increasing their cash ratio significantly more in 2020 compared to their 2019 level, and this is common across all countries and common across most sectors. One possible explanation is the effectiveness of government interventions which often covered a part of firms' fixed costs and total wage bills, letting firms maintain their liquidity. Given the low price of credit in 2020 and the high uncertainty, firms might have also kept part of their credit in cash as precautionary savings, as noted by figure 21. The pandemic has thus not altered the upward trend in cash holdings observed across most developed countries.



FINAL REMARKS

By analysing economic and financial data on 12 European countries available on the BACH database, we shed light on the broad economic impact of the Covid-19 pandemic on European corporations, which interrupted previous favourable economic trends such as increasing turnover, increasing GVA per unit of turnover and EBT margins and decreasing debt share on assets, on a low price of credit scenario.

In 2020, most economic sectors behaved similarly across European countries. We also analysed the striking differences across economic sectors and extensive financial effects depending on an ex-post activity classification: most impacted activities behaved differently than resilient or winner activities, as observed by the heterogeneous effect on corporations' balance sheets.

Our findings show how:

- i) Sectors that were most affected by the pandemic increased their financial debt ratio and decreased their capital ratio, in stark contrast with resilient sectors;
- ii) Trade receivables and trade payables decreased across all countries and sectors, yet the decrease was sharper in sectors most affected by the pandemic;
- iii) The profitability ratios of companies operating within sectors highly hit by the pandemic declined significantly for all countries;
- iv) The pandemic led to widespread employment reductions and a higher cost per worker over gross value added (GVA);
- v) There was a significant general increase in firms' cash holdings, stressing the already markedly sharp rise in firms' cash hoarding after the Global Financial Crisis.

Our results suggest a moderate capacity of the economic sectors to quickly adapt to the adverse economic consequences of the pandemic, although in a very heterogeneous fashion, depending on firms' economic sector specificities.

REFERENCES

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APPENDIX A – TURNOVER CHAIN INDEX

Variable	BACH codes
Turnover	I1 * turnover

Turnover index is a chain index obtained from sliding samples. The first step is to obtain a year-to-year ratio for each sample:

$$ratio_{2008} = \frac{turnover_{2008,sample\ 1}}{turnover_{2007,sample\ -1}}$$

$$ratio_{2009} = \frac{turnover_{2009,sample\ 1}}{turnover_{2008,sample\ -1}}$$

(...)

$$ratio_{2020} = \frac{turnover_{2020,sample\ 1}}{turnover_{2019,sample\ -1}}$$

The chain index for each year is obtained from the multiplication of the current and previous ratios:

$$turnover\ index_{2008,2007=100} = 100 \times ratio_{2008}$$

$$turnover\ index_{2009,2007=100} = 100 \times ratio_{2008} \times ratio_{2009}$$

(...)

$$turnover\ index_{2020,2008=100} = 100 \times ratio_{2008} \times ratio_{2009} \times \dots \times ratio_{2020}$$

