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Bank for the Accounts of Companies Harmonized

OUTLOOK
10

Past Economic Performance of Climate Policy relevant sectors

(December 2021)



Abstract

Outlook #10, entitled “Past Economic Performance of Climate Policy Relevant Sectors”, utilizes BACH data from 11 European countries (Austria, Belgium, Czech Republic, Germany, Spain, France, Croatia, Italy, Poland, Portugal and Slovakia) to assess the structure and evolution of non-financial corporations in climate policy relevant sectors (CPRS) and non-CPRS.

The aim is to highlight structural differences both over time and between the sectors. Therefore, the analysis considers the asset-capital structure, as well as the income-cost structure.

Structural differences between CPR and non-CPR sectors were most prominent with respect to their capital intensity, with CPRS having a larger share of long-term assets. Both sectors went through a deleveraging process over the period from 2007 to 2019. In addition, short-term debt has been replaced by long-term debt.

The data suggests that growth dynamic has been stronger in non-CPRS, which was accompanied by a stronger increase in staff costs. Profitability gaps between CPR and non-CPR sectors harmonized across countries until 2019. Regarding profitability, CPRS offered higher returns on sales whereas non-CPRS yielded higher returns on assets.

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.

Outlook #10 analyses economic differences and dynamics of climate policy relevant (CPR) and non-CPR sectors from 2007 to 2019. Since the sentiment towards a greener economy intensified within the past decade, it is interesting to ask whether policies and actions are visible in firms balance sheets and income statements.

CPRS refers to industries that could be exposed to a low-carbon transition, both positively and negatively.

Overall, structural differences between the sectors have not been large, but non-CPR industries reported a more vigorous change with respect to some key variables whereas CPR sectors did not report fundamental changes.

Across sectors, firms reported an improvement regarding their financial situation. Equity ratios increased and short-term debt has been reduced.

The indicators studied in this outlook suggest that the sample economies experienced a relative increase in non-climate policy relevant sectors with respect to gross value added accompanied by a rise in staff cost share.

Profits were higher for every Euro earned in CPR sectors. However, the return on investment was higher in non-CPR sectors.

INTRODUCTION

The coronavirus pandemic (Covid-19), next to its implications for businesses (see BACH Outlook #9), has had a substantial impact on global emissions: In 2020, after decades of increases, global carbon dioxide emissions fell by 6.4% (or 2.3 billion tonnes).¹ Nevertheless, to not exceed the goals of the 2015 Paris climate agreement, a 7.6% cut in carbon emissions per year would have to be saved worldwide until 2030, according to the United Nations Environmental Program.²

With regard to these targets and its impacts on economies as a whole, the European Commission presented the Green Deal in 2019³, setting the goal to become the first climate-neutral continent by 2050. By aiming at transforming the EU into a low-carbon and more circular economy, an attempt is made to reduce emissions and thus also lower risks stemming from climate change and its impacts on businesses in the long run.

These risks, depending on the location and the activity of a business, differ from previous risks as they are global in nature, but vary in the impact across entities or sectors. The extent to which a sector is particularly affected depends on its vulnerability. For this study, vulnerability refers to the exposure towards transition risk. The climate policy relevant sector scheme developed by Battiston et al. at the University of Zurich in 2017 in the Center for Financial Networks and Sustainability (FINEXUS)⁴ provides a helpful classification of different economic activities. The classification is motivated by the need for a broader look at transition risks in terms of potential losses (including so-called “stranded assets”) and gains alike. In addition, the concept aims at ensuring reproducibility and comparability across portfolios and jurisdictions. According to FINEXUS, the Climate Policy Relevant Sectors (CPRS) methodology is also fully compatible with the EU Taxonomy for the sustainable activities⁵.

The classification lists activities (at the NACE Rev2, 1 to 4-digit level) based on their energy technology (e.g. fossil fuel or renewable energy), and divides them into sectors that could be affected in a positive or negative way by a disorderly transition to a low-carbon economy.

Taking into account the (in)direct contribution to greenhouse gas (GHG) emissions, their relevance for climate policy implementation (e.g. their vulnerability to directives such as the EU carbon leakage directive 2003/87/EC) and their role in the energy value chain, the scheme distinguishes the following sectors:

Number	Name	CPRS
1	Fossil fuel	Yes
2	Utility	Yes

¹ [Nature: COVID curbed carbon emissions in 2020 — but not by much](#)

² [United Nations Environment Program: Cut global emissions by 7.6 percent every year for next decade to meet 1.5°C Paris target - UN report \(unep.org\)](#)

³ [A European Green Deal](#)

⁴ See [UZH - FINEXUS: Center for Financial Networks and Sustainability - Climate Policy Relevant Sectors](#)

⁵ [EU taxonomy for sustainable activities | European Commission \(europa.eu\)](#)

3	Energy intensive	Yes
4	Buildings	Yes
5	Transportation	Yes
6	Agriculture, etc.	Yes
7	Finance	No
8	Scientific, R&D	No
9	Others	No

Sectors 1 to 6 are classified as climate policy relevant sectors (CPRS) whereas sectors 7, 8 and 9 are non-CPRS.

Keeping track of these different exposures, Outlook #10 aims at analyzing and comparing the historical structure and performance of European firms for CPRS and non-CPRS by studying different economic indicators and ratios both with the help of a dynamic and a static analysis.

By leveraging on the long history of the BACH data, we investigate whether the public and political commitment to mitigate climate change, which has become more pronounced in recent years, are already visible in non-financial companies' financial statements (sectors 1-6, 8 and 9).

This report is structured as follows. Section 1 begins with an overall description of the BACH database and its characteristics and the methodology for this report. Section 2 provides an overview of the sample structure. Section 3 analyses the asset-capital structure, followed by an analysis of income-cost dynamics in section 4. Section 5 summarizes and highlights important findings.

1. DATA DESCRIPTION AND METHODOLOGY

In total, the BACH database holds statistics for 95 financial/economic variables and 12 European countries. For each financial variable, the database provides the weighted mean and quartiles aggregated by sector and by size class.

This analysis was prepared using data⁶ for 11 countries: Austria, Belgium, Czech Republic, Germany, Spain, France, Croatia, Italy, Poland, Portugal and Slovakia. It covers the evolution from 2007 to 2019 using data points for 2007, 2011, 2015 and 2019. For this analysis, the BACH data are categorized into CPRS and non-CPRS based on the (NACE Rev.2) 2-digit classification as outlined in Annex I.

The report covers a subset of key indicators that are compiled accordingly. The CPRS and non-CPRS aggregated statistics are weighted by the shares of the corresponding 2-digit sectors, either by total assets (for balance sheet variables) or by turnover (for income statement variables). For most statistics, this is done for the sample comprising all firms. Given by the equations below, the weighted means (or quartiles)

⁶ Extraction Date: 5th October 2021

for every NACE sector (i) in country (c) and year (t) are aggregated to a CPRS-weighted mean (or quartile) and likewise for the non-CPRS.

$$w_{i,c,t} = \frac{\text{Total assets}_{i,c,t}}{\sum_i \text{Total assets}_{i,c,t}}$$
$$\text{CPRS}_{c,t} = \sum_i WM_{i,c,t} * w_{i,c,t}$$

The first equation describes the calculation of the weight for every NACE sector (i) in country (c) in year (t). Multiplying the weighted mean with the corresponding weight and aggregating over all NACE sectors yields the CRPS weighted mean for country (c) in year (t). For some statistics, the analysis is done in a more disaggregated manner, e.g., differentiated by firm size or by sectors 1-9⁷ and the weighting is adjusted accordingly.

NATIONAL SAMPLES – GENERAL COVERAGE

Compilation methods used by the national authorities when producing BACH aggregates differ among the participating countries, leading to different degrees of exhaustiveness or representativeness of the statistical base material available for the national financial statements. While some countries (Belgium, Croatia, Italy and Portugal) collect data from an exhaustive survey, others collect data from selected samples that might not represent neither a complete survey, nor a statistically representative sample (see Table 2 in the Annex for coverage ratios per sector).

Therefore, data should be interpreted considering that different coverage levels of the samples and, for each country, different coverage levels by economic activity and company size, may lead to the under or over-representation of some groups of companies in samples, which can result in figures' bias for the total of the economy.

⁷ Sector 7 (Finance) is excluded because BACH Database does not provide data for financial companies.

2. SAMPLE STRUCTURE

As the aim of the report is the comparison of climate policy relevant and non-CPR industries, a natural question is whether there are countries that may be particularly prone to such policies. Therefore, Chart 1 displays the distribution of gross value added (Panel A) and total assets (Panel B) across industries for every country.

Panel A shows that gross value added (GVA) was roughly equally distributed between CPR and non-CPR industries, with a slight edge for CPRs in 2007 in most countries. However, over the period to 2019, the data reports a relative increase in the non-CPR sectors showing that non-CPR industries were growing faster than CPR industries. Only Germany is not associated with an increase in the non-CPR share.

Data for Austria indicates an overrepresentation of the buildings sector. Compared to the other countries, the fraction of GVA dedicated to the buildings sector is almost twice as large. Other than that, the sample appears to be comparable across countries and time.

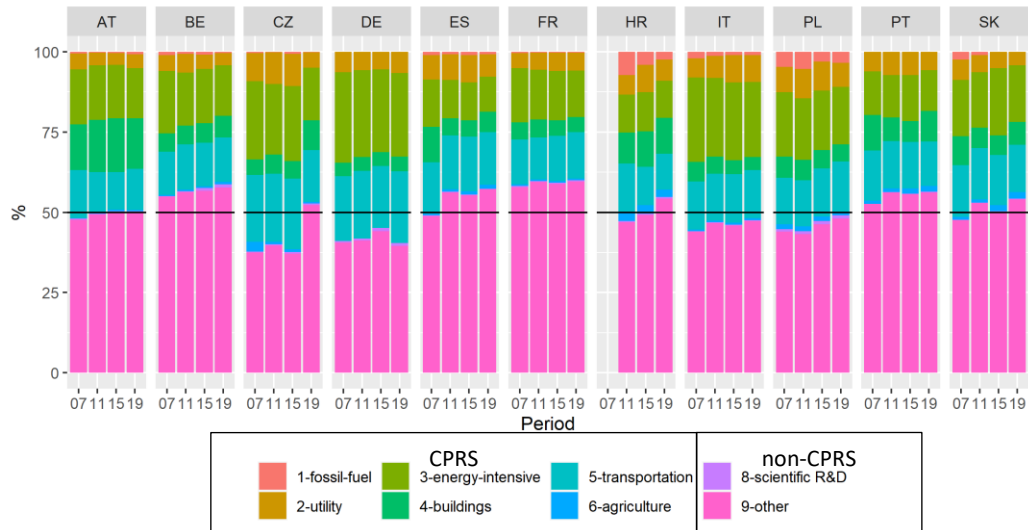
Panel B presents statistics on total assets. For most economies, the fraction of total assets reported by non-CPR industries was smaller compared to the proportion associated with CPR industries in 2007. In the case of Germany and Spain the distribution changed over time. Spain reported a relative increase in the non-CPR sector whereas the non-CPR share declined in Germany.

As with GVA statistics, the buildings sector is overrepresented in the sample for Austria compared to the other countries and one can identify a change in the reported data for the Czech Republic in 2019.

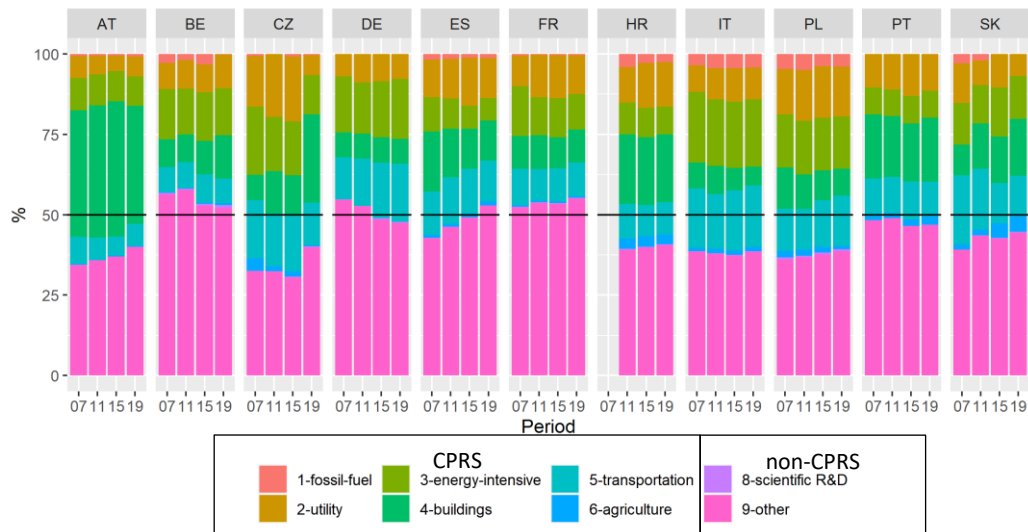
Relating the graphs to one another, one can observe that countries associated with a relative increase in the GVA share reported by the non-CPR sector also reported a slight increase in the share of total assets. Although both sectors produced roughly equal GVA, more capital was bound in the CPR sector. The German economy appears to be an exception, although the share dedicated to the CPR sectors was notably larger with regards to GVA, assets were roughly equally distributed between CPR and non-CPR industries.

Chart 1– Shares of gross value added and total assets by sector

Panel A: Gross value added (GVA)



Panel B: Total assets



Data before 2008 is not available for Croatia.

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

3. ASSETS AND CAPITAL

CAPITAL INTENSITY

Chart 2 displays the ratio of non-financial fixed assets to total assets. Panel A sketches the weighted mean for every country split by CPRS and non-CPRS.

The Chart shows that non-CPR and CPR industries differed largely in terms of their asset structure. As expected, the CPR sector was much more capital intensive because these industries require big factories, machinery and other capital goods. There was large dispersion within the two sectors, but the differences were consistent across sectors, meaning that countries that were relatively capital intensive in non-CPRS have also been more capital intensive in the CPR sector. Thus, suggesting that there are important country effects. There were two exceptions: Italy, where the difference between CPR and non-CPR was marginal and Austria, which ranked midfield in the non-CPR sector but due to the overrepresentation of the buildings sector reported the highest non-financial assets ratio with respect to the CPR-sector.

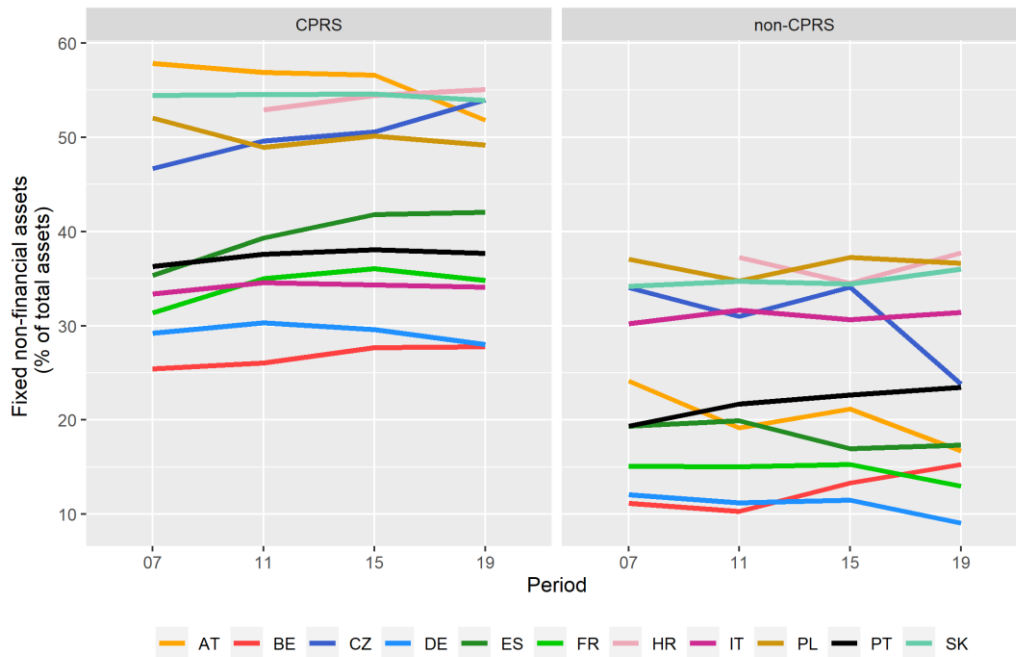
The data also shows that the share of fixed non-financial assets was relatively for most countries in both sectors. Czech Republic, France and Spain reported a constant increase in the CPR sector, whereas there has been a slight decrease in the non-CPR sector. The change observed in the Czech Republic for the year 2019 is explained by the change in the reported data. Austria reported a notable decline of non-financial fixed assets ratio, from 2007 to 2019, in both sectors.

With shares between 35-38% over the period from 2007 to 2019, Slovakia, Poland and Croatia report the highest non-financial asset ratios in the non-CPR sector. With roughly 10-12% between 2007 and 2011, Germany and Belgium were identified with the lowest ratios. After 2011, the ratio increased for Belgium. With just under 10% in 2019, Germany reported the lowest ratio in 2019.

Belgium and Germany also reported the lowest ratios in the CPR sector, reaching a maximum of 27 and 30% respectively. With 58%, the highest ratio, reported by Austria in 2007, is twice as large. Spain, the median economy in this sector, reported a ratio of 42% in 2019.

Chart 2– Fixed non-financial assets ratio (A13 over A1)

All firms (WM)



Data before 2008 is not available for Croatia.

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

FUNDING STRUCTURE

Chart 3 displays the degree of equity funding in the two sectors measured by the equity ratio. Specifying the 25, 50 and 75%-quantiles for both sectors, the graph illustrates the distribution of the equity ratio. The lower bound indicates the 25%-quantile, the median and the 75%-quantile are marked by the dot and the upper bound respectively.

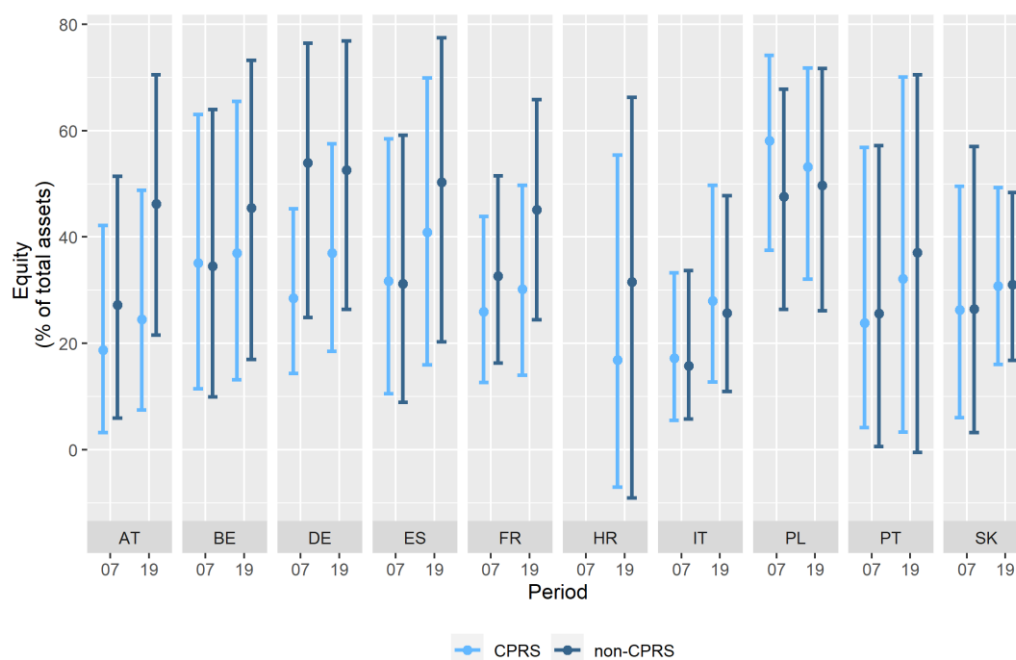
The graph shows that equity ratios increased throughout the population as the distribution shifts upwards from 2007 to 2019. Measured by the median, equity ratios almost universally rose over the period from 2007 to 2019 in both sectors. Only Germany and Poland reported a slight decrease in non-CPRS and CPRS respectively.

Overall, non-CPRS showed higher equity ratios. In Austria, Germany and France the distribution of equity ratios between CPR and non-CPR industries already differed substantially in 2007 and increased until 2019. Although the difference marginalized until 2019, Poland and Italy were the only economies that

reported higher equity ratios in CPR sectors both in 2007 and 2019. However, these two countries differed largely with respect to their equity ratio levels.

Chart 3 – Distribution of equity ratio (E)

All firms (Q1, Q2, Q3)



Data before 2008 is not available for Croatia. Quartiles are not available for the Czech Republic.

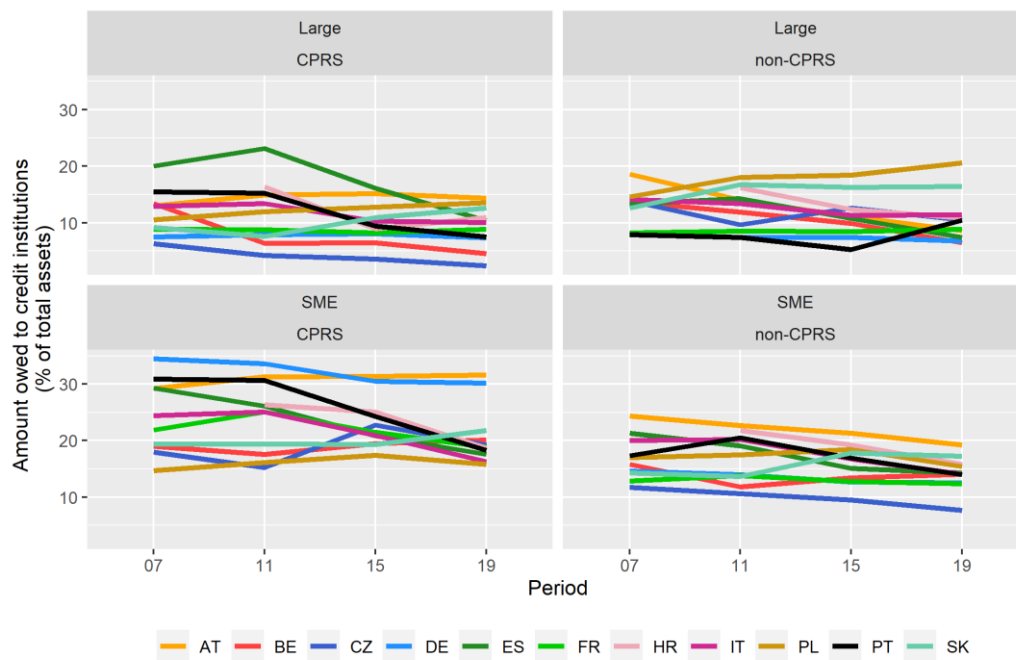
Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; PL - Poland; PT - Portugal; SK - Slovakia.

Dispersion, measured by the inter-quartile-range, tended to be country driven and remained stable over time for CPRS and non-CPRS. Croatia and Portugal were associated with the largest dispersion in 2019. Also, Croatia reported negative ratios with respect to the first quartile. Slovakia reported a declining inter-quartile-range from 2007 to 2019, such that the distribution of equity ratios has been equal across sectors in 2019.

Measured by the weighted mean, Italy reported the lowest equity ratio in the non-CPR sector. Despite a constant increase from 2007 to 2019, Italy remained among the most highly leveraged economies in the non-CPR sector, reporting an equity ratio of 33%. With 50%, the highest mean ratio was reported by the Czech Republic. With respect to the non-CPR sector, Spain reported the highest equity ratio in 2019.

Chart 4 displays the weighted mean of bank borrowings by firm size.

Chart 4 – Amount owed to credit institutions (L2)
By firm size (WM)



Data before 2008 is not available for Croatia.

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

The Panel shows that the capital-intensive CPR sectors borrowed relatively more from banks, particularly in 2007, which might be due to the financial crisis. However, the level of bank borrowing did not differ much for the sectors with respect to large firms but the differences between the sectors stemmed from SMEs. CPR SMEs borrowed more compared to SMEs in the non-CPR sector and compared to large firms in general.

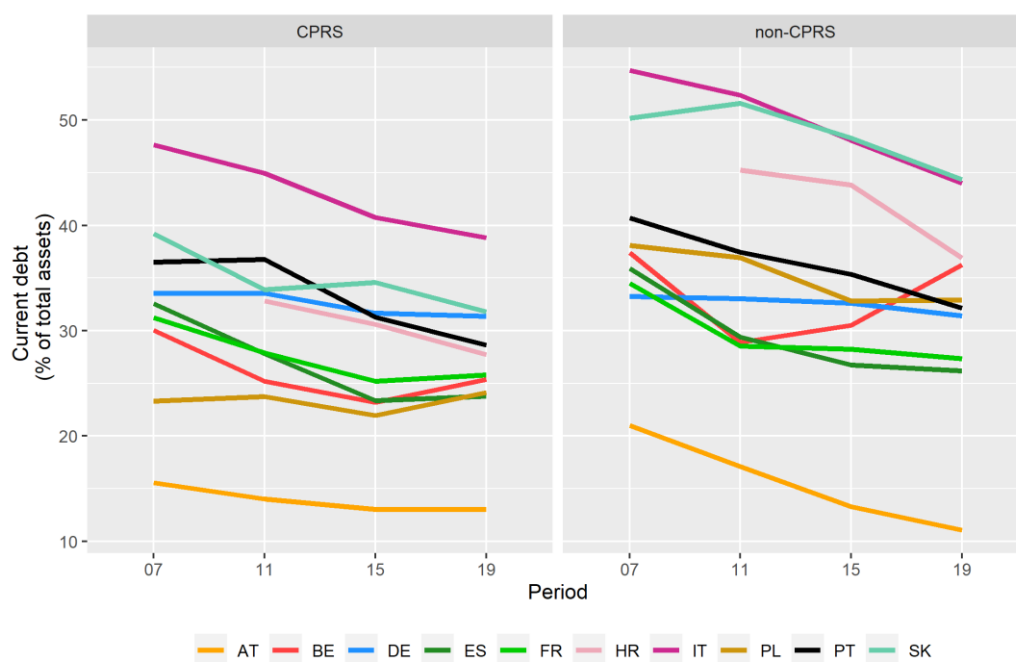
Measured by the overall weighed mean (no differentiation by firm size), France and southern European economies like Italy, Spain and Portugal reported a strong decrease in bank borrowings from 2007 to 2019, particularly in the CPR sector where the ratio has been reduced by roughly 50%. Poland and Slovakia are associated with an increase of bank borrowings. In Austria and Czech Republic, bank credit decreased in the non-CPRS, but a slight increase in the CPRS-sector is reported.

A detailed analysis of Chart 4 shows that Slovakia was the only economy that reported a bank credit expansion across sectors and size classes. Apart from Slovakia, all economies reported a reduction in the ratio with respect to SMEs in non-CPRS whereas CPRS depict a more heterogeneous picture. In Italy, Czech Republic, Belgium and Spain large firms reduced bank debt across sectors. Large companies increased borrowing in Poland across sectors.

FUNDING HORIZON

Chart 5 displays firms funding structure according to the debt maturity. Specifically, the plot presents the ratio of current debt to total assets.

Chart 5 – Debt maturity - current debt ratio (R16)
All firms (WM)



Data before 2008 is not available for Croatia. Data on debt maturity not available for the Czech Republic for 2007, 2011 and 2015.
Legend: AT - Austria; BE - Belgium; CZ - Czech Republic; DE - Germany; ES - Spain; FR - France; HR - Croatia; IT - Italy; PL - Poland; PT - Portugal; SK - Slovakia.

The data shows that the non-CPR and the CPR sector differed by the level of current debt. The non-CPR sector had a higher current debt to assets ratio in general. The ratio almost uniformly decreased from 2007 to 2019. Poland reported a constant level of current debt in CPRS. Belgium reported a decline from 2007 to 2015, but until 2019, short-term debt ratios shifted up to 2007 levels again in the non-CPR sector. Austria reported the lowest ratio in both sectors throughout the period. The highest ratios were reported in Italy.

The reduction of short-term debt is accompanied by an increase of long-term debt across sectors and economies. For example, Slovakia had the lowest non-current debt ratio in the CPR sector in 2007 but the ratio doubled until 2019, reaching 24%. With 14%, Poland reported the lowest non-current debt ratio in 2019. With 33% in France, the maximum ratio in 2019 has been more than twice as high.

These results remain robust across the distribution and firm size. Thus, firms replaced short-term debt with long-term debt indicating that there has been dynamic investment activity. The scatterplot in Chart 6 sketches the relation between the share of long-term funding (equity + non-current debt) and share of fixed assets (the golden rule of finance) for every period. For a more disaggregated view, the statistics are aggregated at the industry level (CPRS: sectors 2-6, non-CPRS: sector 9, sectors 1 and 8 are omitted because their weight is negligible). The shift to the top right corner over time which is also seen for the regression lines per year indicates an expansion. The expansion was mostly driven by investment into financial assets, whereas the ratio of non-financial assets has been relatively stable (see Chart 2).

Chart 6– Golden rule of finance – fixed assets ratio (A1) vs long-term funds ratio (E + R15)

All firms (WM)



4. INCOME, COSTS AND PROFITS

GROSS VALUE ADDED

Chart 7 displays the gross value added as a fraction of net turnover.

Starting in 2007, gross margins have been higher in the CPR sector across all countries. The economic downswing from the financial crisis hit the CPR sector harder, particularly the energy (fossil fuel and utility) and buildings sectors. This led to a reduction in the gap. However, most countries showed a recovery such that gross value added increased in both sectors until 2019, except for Germany and Poland which experienced a decrease of the GVA-ratio in the CPR sector.

Past economic performance of climate policy relevant sectors

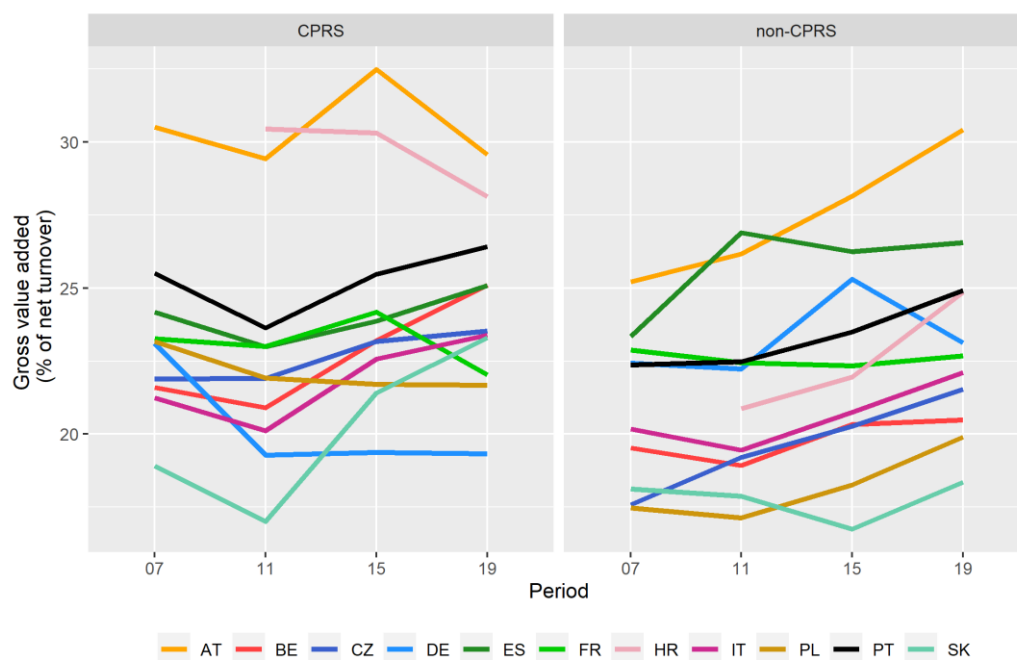
Austria reported the largest GVA share in both sectors over the periods 2007, 2015 and 2019. With regards to the non-CPR sector, Slovakia reported the lowest share for 2007 and 2011, 19% and 16% respectively. However, after 2011 the GVA share increased substantially, reaching almost 24% in 2019. In the non-CPR sector, the development has been less dynamic in Slovakia such that it was associated with the lowest GVA in 2015 and 2019, where Poland started lowest with 17% in 2007 reaching 20% by 2019.

Comparing 2007 and 2019, the differences between the sectors remained largely on the same level. Slovakia increased the gap by more than 4 pp. Germany and Spain on the other hand reported a relative increase of the gap in favor of the non-CPR sector as gross value added decreased in the CPR and increased in the non-CPR sector.

The increase of gross value added implies a relative reduction of material costs which is displayed in Chart 8.

Chart 7 – Gross value added ratio (R31)

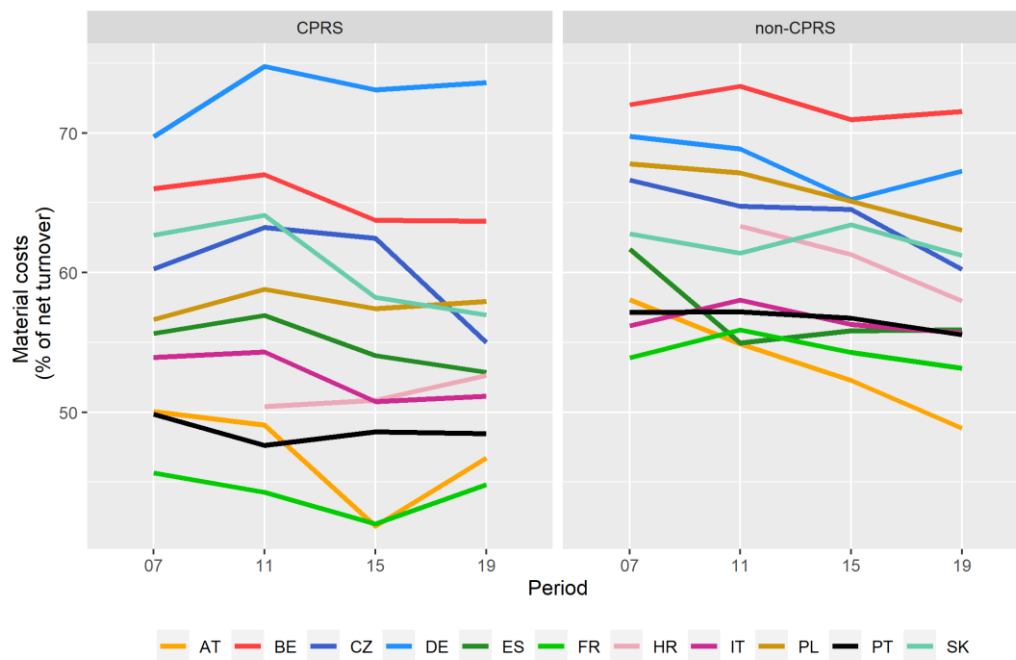
All firms (WM)



Data before 2008 is not available for Croatia.

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

Chart 8– Material costs ratio (I5)
All firms (WM)



Data before 2008 is not available for Croatia.

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

In most countries, the share of material costs in turnover decreased in both sectors. Austria reported the largest material cost reduction in the non-CPR sector. Slovakia and the Czech Republic posted the largest decreases in the CPR sector, whereas Germany and Poland experienced material cost share increases from 2007 to 2019.

Except for Germany, data shows that the share of material costs is generally larger in the non-CPR sector. In 2019, Austria was associated with the lowest material cost share of under 50% compared to maximum of more than 70% in Belgium. With a share of roughly 45%, France is assigned with the lowest material costs level in the CPR sector, whereas Germany topped this list with a cost share of almost 75%.

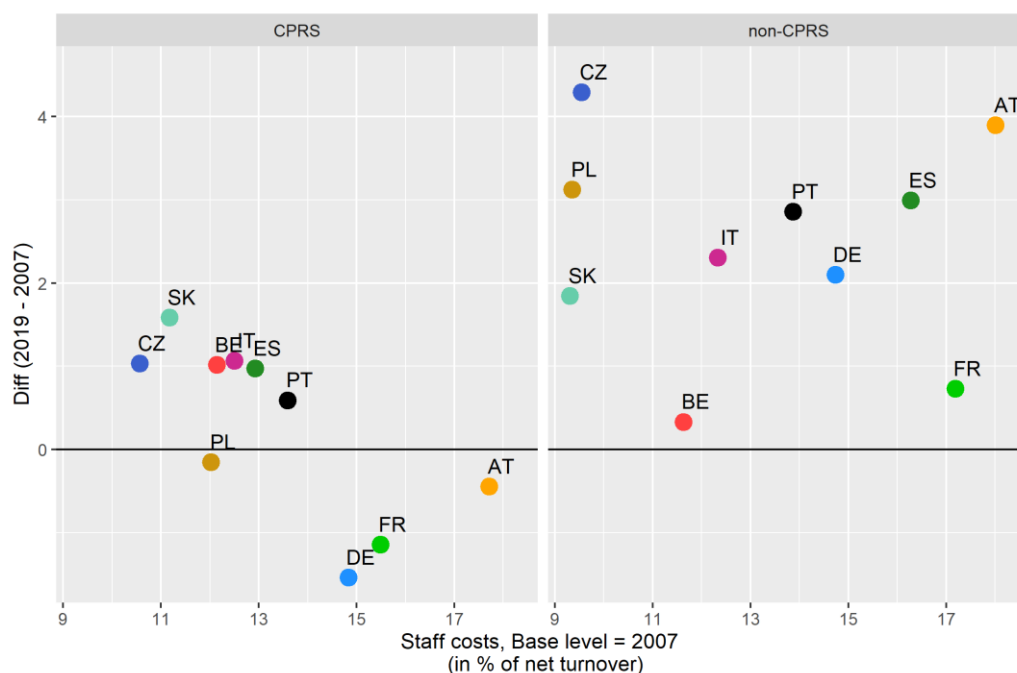
Thus, ranging between 45-75% and 49-72% of net turnover, material costs identify as the biggest chunk with respect to costs.

STAFF COST

Chart 9 displays the change in the share of staff costs over net turnover from 2007 to 2019.

Chart 9 – Staff costs ratio (I7)

All firms (WM)



Data before 2008 is not available for Croatia.

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

Independent of their base level in 2007, all countries reported an increase in staff costs from 2007 to 2019 with respect to the non-CPR sector. With over 4 pp., the Czech Republic posted the largest increase. However, Austria, which started with the highest level in 2007, also reported an increase of just under 4 pp. Portugal, the median economy with respect to the staff cost share, experienced an increase of almost 3 pp. Belgium and France recorded moderate increases only.

Overall, the CPR sector showed smaller increases. Portugal reported an increase of just under 1 pp. Moreover, countries with a particularly high staff cost share in 2007 reported a decrease until 2019. Belgium is the only country associated with a larger increase in the CPR sector compared to non-CPRS

RETURN ON SALES

Chart 10 displays the return on sales (ROS). Panel A refers to the weighted mean and Panel B illustrates the within country difference between the sectors where negative values indicate a higher return in CPR sectors.

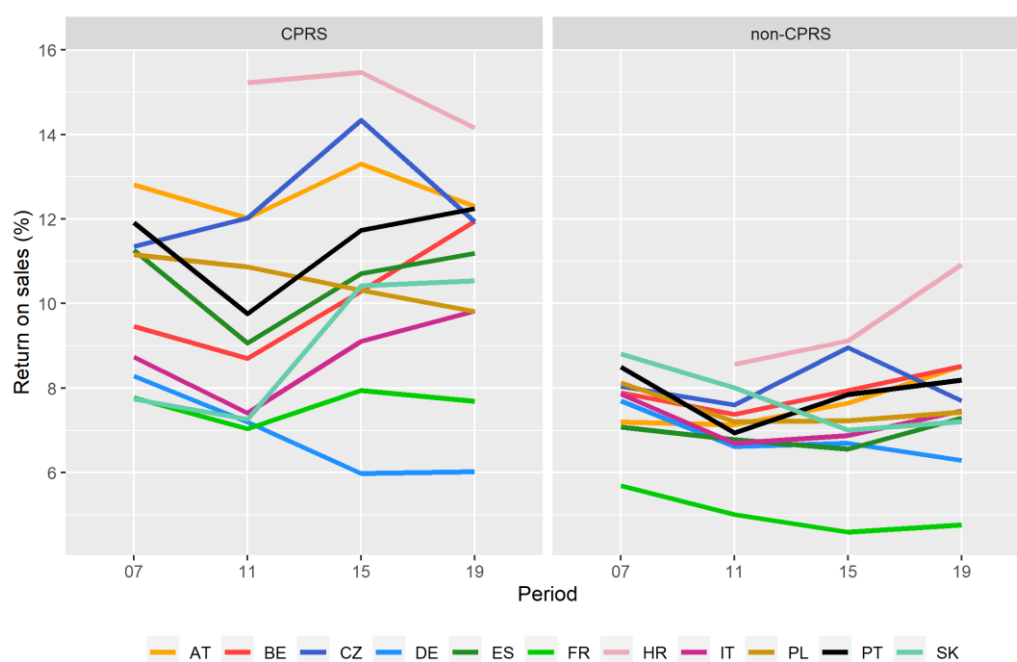
Panel A shows that there was only moderate dispersion in the non-CPRS-sector. Except for the shock in 2011, returns have been largely stable from 2007 to 2019. Germany reported a steady decline of sales profitability in both sectors from 2007 to 2019. Austria reported an increase of 1.3 pp from 2007 to 2019 in the non-CPR sector. Regarding the CPR sector, Belgium and Slovakia were associated with the highest return increases of 2.6 and 2.8 pp. respectively.

Compared to the other countries, France was associated with low ROS of 5 to 6% in the non-CPR sector. The other countries varied between 7 to 9%. France has also been associated with one of the lowest ROS in the CPR sector. After the breakdown in 2011, Germany has not recovered sales-profitability and therefore is associated with the lowest ROS in 2015 and 2019. The highest returns were reported by Croatia in both sectors.

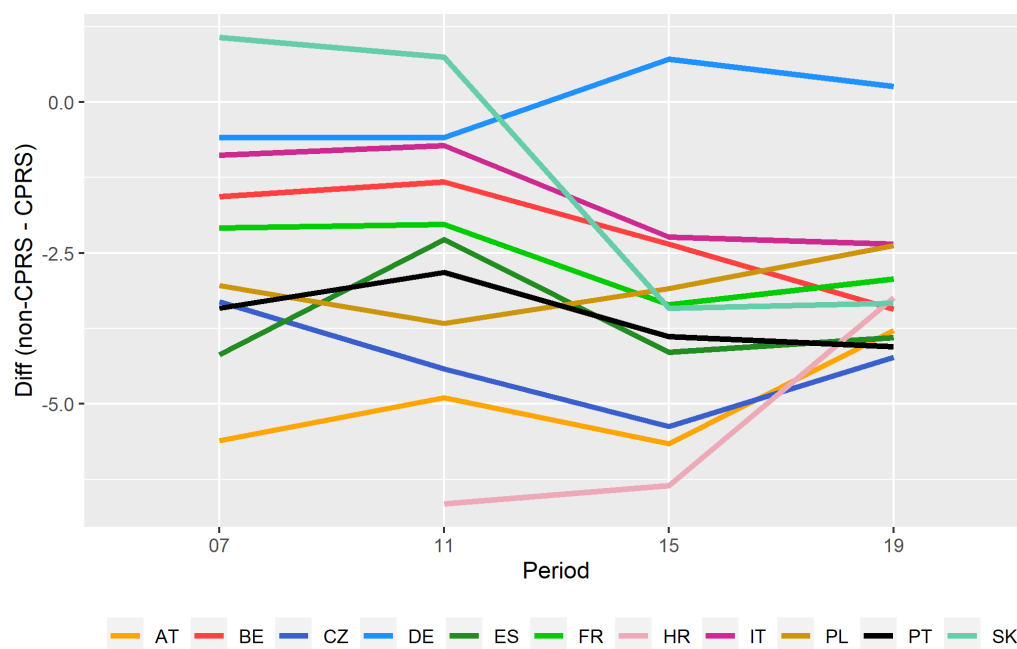
Panel B shows that ROS were generally higher in the CPR sector. Return gaps ranged from slightly positive in Slovakia to -5.6 pp. in Austria in 2007. The data shows a harmonization across countries until 2019, where the gaps ranged from -2.3 to -4.2 pp. The German economy differed from the other European countries with respect to ROS as throughout the period the return gap has been negligible.

Chart 10 – Return on sales (R32)

Panel A: All firms (WM)



Panel B: All firms (diff in country)



Data before 2008 is not available for Croatia.

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

RETURN ON ASSETS

Chart 11 displays the return on assets. Panel A plots the within country difference between the CPR and non-CPR sector, where a positive difference implies a higher return in the non-CPR sector. Panel B illustrates the distribution of ROA.

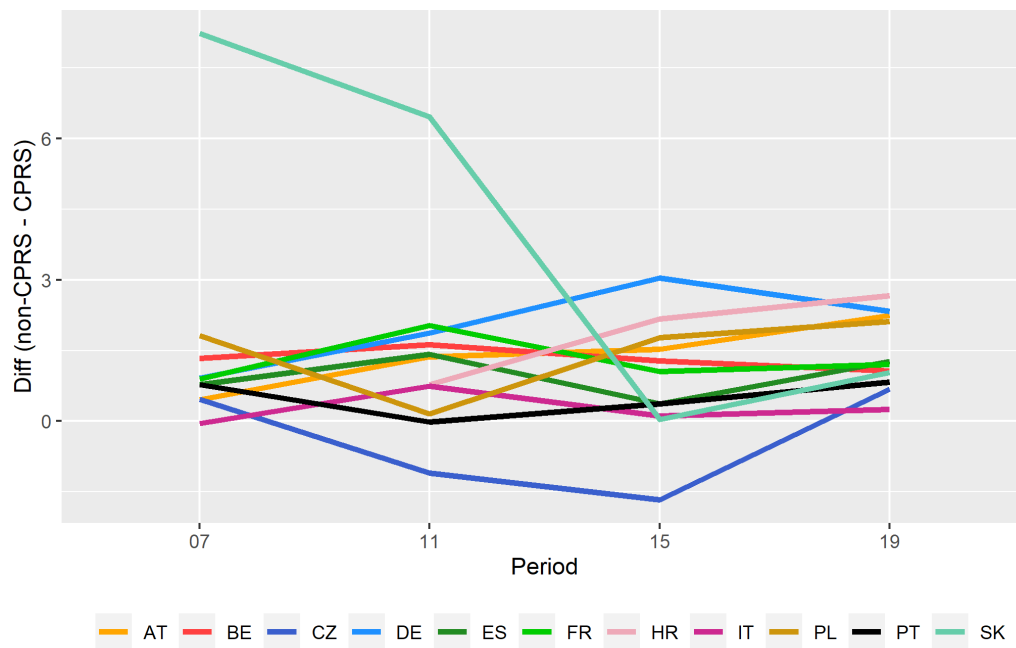
Panel A shows that returns were slightly higher in the non-CPR sector in nearly all countries. Only Czech Republic reported higher returns in the CPR sector in 2011 and 2015. The difference in returns between the sectors remained largely constant, Germany and Croatia reported a moderate shift in favor of the non-CPR industries. 2007 and 2011 data for Slovakia marks an outlier. Differences ranged between 0 and +2.9 pp. in 2019.

Measuring ROA in levels rather than within country differences shows that eastern European economies operated more profitable in both sectors, although Poland reported a decline from 2007 to 2019. The Czech Republic was associated with an increase from 2007 to 2019. In Slovakia, returns on assets declined in the non-CPR sector, whereas the rate of return increased in the CPR sector. Except for Austria, which showed a slight increase in the non-CPR sector, all other countries reported a decline in the rate of return in both sectors.

Panel B displays the distribution of returns on assets for 2007 and 2019. Except for Germany in 2007, all countries were associated with higher returns in the non-CPR industries. Inter-quartile-ranges were larger in non-CPR sectors indicating higher dispersion. Furthermore, comparing the gap between Q2-Q1, and Q3-Q2 it can be seen that the distribution of returns was slightly right-skewed. The non-CPR sector thus offered higher profit opportunities for innovative enterprises.

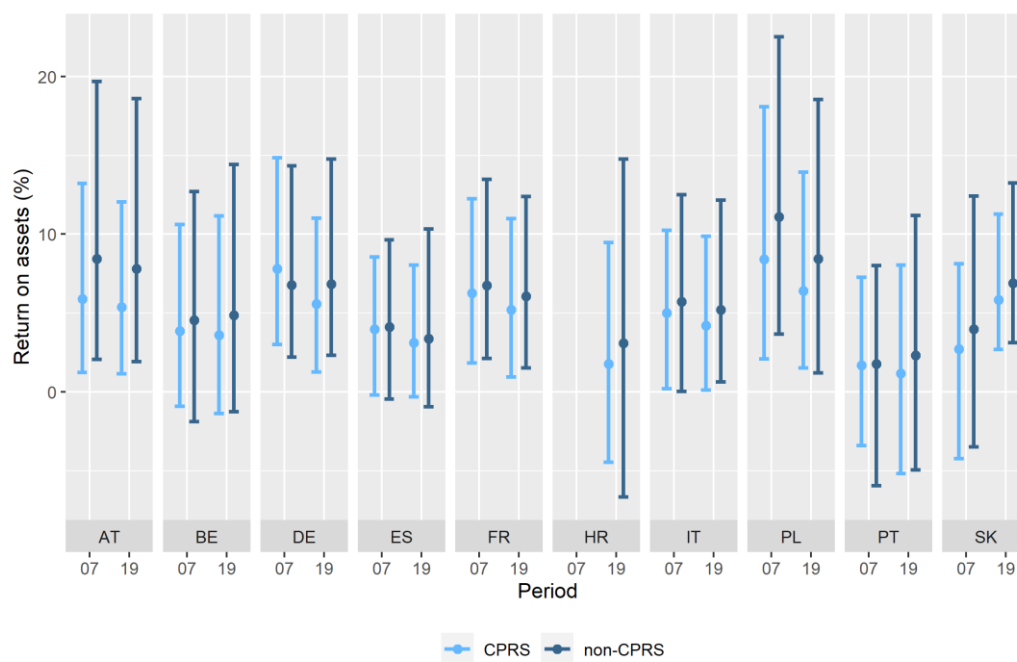
Chart 11 – Return on assets (R39)

Panel A: All firms (diff in country)



Panel B: Distribution of return on assets (R39)

All firms (Q1, Q2, Q3)



Data before 2008 is not available for Croatia.

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

5. FINAL REMARKS

Based on the analysis of firms' balance sheets and income statements, this outlook concludes that differences were mostly country rather than sector driven. Regarding the asset-capital structure, climate policy relevant and non-CPR sectors showed homogenous dynamics. However, with respect to the income-cost structure, the data indicates a more dynamic development among non-CPR industries.

CPR and non-CPR sectors differed most with respect to asset structure with CPR industries being much more capital intensive. For CPRs and non-CPRs investments were driven by investment in financial assets, whereas the ratio of non-financial assets has been relatively stable over time.

The funding structure fundamentally changed in both sectors. The data indicates a deleveraging process from 2007 to 2019, particularly in southern European economies. The increase in equity ratios has been more prominent in non-CPR sectors. Also, firms replaced short-term debt with long-term debt. Thus, the financial situation improved significantly for firms across sectors. In general, non-CPR sectors were associated with higher bank borrowings, particularly SMEs.

Differences between CPR and non-CPR sectors are more vigorous with respect to earnings and costs. The non-CPR sectors reported a notably larger increase with respect to gross value added. This increase also led to a rise in the total GVA share attributed to non-CPR industries from 2007 to 2019 across countries. The rise of gross margins was accompanied by an increase of staff costs.

Profitability, measured by the return on sales and the return on assets, offers an interesting insight. While sales profitability was higher in CPR sectors, non-CPR sectors reported higher returns on investment., indicated by larger inter-quartile-ranges, the higher returns were accompanied by higher dispersion. ROS gaps harmonized across countries until 2019. ROA gaps have been largely stable over the period.

ANNEX

Table 1: Sector classification by NACE Panel A: CPRS		
Industry	NACE-code	NACE-section
1-fossil-fuel	B05	Mining of coal and lignite
1-fossil-fuel	B06	Extraction of crude petroleum and natural gas
1-fossil-fuel	B09	Mining support service activities
1-fossil-fuel	C19	Manufacture of coke and refined petroleum products
2-utility	D35	Electricity, gas, steam and air conditioning supply
2-utility	E36	Water collection, treatment and supply
2-utility	E37	Sewerage
2-utility	E38	Waste collection, treatment and disposal activities
3-energy-intensive	B07	Mining of metal ores
3-energy-intensive	C11	Manufacture of beverages
3-energy-intensive	C13	Manufacture of textiles
3-energy-intensive	C14	Manufacture of wearing apparel
3-energy-intensive	C15	Manufacture of leather and related products
3-energy-intensive	C17	Manufacture of paper and paper products
3-energy-intensive	C20	Manufacture of chemicals and chemical products
3-energy-intensive	C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
3-energy-intensive	C22	Manufacture of rubber and plastic products
3-energy-intensive	C23	Manufacture of other non-metallic mineral products
3-energy-intensive	C24	Manufacture of basic metals
3-energy-intensive	C26	Manufacture of computer, electronic and optical products
3-energy-intensive	C27	Manufacture of electrical equipment
3-energy-intensive	C28	Manufacture of machinery and equipment n.e.c.
3-energy-intensive	C32	Other manufacturing
4-buildings	C31	Manufacture of furniture
4-buildings	F41	Construction of buildings
4-buildings	I55	Accommodation

4-buildings	L68	Real estate activities
5-transportation	C29	Manufacture of motor vehicles, trailers and semi-trailers
5-transportation	C30	Manufacture of other transport equipment
5-transportation	F42	Civil engineering
5-transportation	G45	Wholesale and retail trade and repair of motor vehicles and motorcycles
5-transportation	H49	Land transport and transport via pipelines
5-transportation	H50	Water transport
5-transportation	H51	Air transport
5-transportation	H52	Warehousing and support activities for transportation
5-transportation	H53	Postal and courier activities
6-agriculture	A01	Crop and animal production, hunting and related service activities
6-agriculture	A02	Forestry and logging
6-agriculture	A03	Fishing and aquaculture

Panel B: non-CPRS

Industry	NACE-code	NACE-section
8-scientific R&D	M72	Scientific research and development
9-other	B08	Other mining and quarrying
9-other	C10	Manufacture of food products
9-other	C12	Manufacture of tobacco products
9-other	C16	Manufacture of wood and of products of wood and cork, except furniture
9-other	C18	Printing and reproduction of recorded media
9-other	C25	Manufacture of fabricated metal products, except machinery and equipment
9-other	C33	Repair and installation of machinery and equipment
9-other	E39	Remediation activities and other waste management services
9-other	F43	Specialised construction activities
9-other	G46	Wholesale trade, except of motor vehicles and motorcycles
9-other	G47	Retail trade, except of motor vehicles and motorcycles
9-other	I56	Food and beverage service activities
9-other	J58	Publishing activities
9-other	J59	Motion picture, video and television programme production, sound recording and music publishing activities

Past economic performance of climate policy relevant sectors

9-other	J60	Programming and broadcasting activities
9-other	J61	Telecommunications
9-other	J62	Computer programming, consultancy and related activities
9-other	J63	Information service activities
9-other	M69	Legal and accounting activities
9-other	M70	Activities of head offices
9-other	M71	Architectural and engineering activities
9-other	M73	Advertising and market research
9-other	M74	Other professional, scientific and technical activities
9-other	M75	Veterinary activities
9-other	N77	Rental and leasing activities
9-other	N78	Employment activities
9-other	N79	Travel agency, tour operator and other reservation service and related activities
9-other	N80	Security and investigation activities
9-other	N81	Services to buildings and landscape activities
9-other	N82	Office administrative, office support and other business support activities
9-other	P85	Education
9-other	Q86	Human health activities
9-other	Q87	Residential care activities
9-other	Q88	Social work activities without accommodation
9-other	R90	Creative, arts and entertainment activities
9-other	R91	Libraries, archives, museums and other cultural activities
9-other	R92	Gambling and betting activities
9-other	R93	Sports activities and amusement and recreation activities
9-other	S94	Activities of membership organisations
9-other	S95	Repair of computers and personal and household goods
9-other	S96	Other personal service activities

Table 2: Coverage ratios by sector

NACE SECTION	2019	2019	2017	2018	2019	2019	2018	2019	2019	2019	2019
	AT	BE	CZ	DE	ES	FR	HR	IT	PL	PT	SK
Total NACE (includes M701, excludes K 642)	41%	63%	5%	66%	35%	76%	100%	N/A	2%	100%	55%
Agriculture, forestry and fishing	35%	76%	7%	29%	0%	78%	100%	100%	14%	100%	52%
Mining and quarrying	60%	83%	31%	N/A	27%	79%	100%	100%	7%	100%	42%
Manufacturing	68%	61%	8%	75%	37%	85%	100%	100%		100%	61%
Electricity, gas, steam and air conditioning supply	50%	71%	23%	92%	69%	99%	100%	100%		100%	61%
Water supply, sewerage, waste management and remediation act.	66%	57%	7%	53%	59%	87%	100%	100%		100%	58%
Construction	58%	68%	3%	37%	35%	74%	100%	100%	2%	100%	48%
Wholesale and retail trade; repair of motor vehicles and motorcycles	38%	64%	3%	59%	41%	81%	100%	100%	3%	100%	62%
Transportation and storage	48%	75%	5%	51%	45%	73%	100%	100%	2%	100%	56%
Accommodation and food service activities	37%	62%	4%	28%	25%	61%	100%	100%	2%	100%	26%
Information and communication	29%	62%	5%	56%	42%	80%	100%	100%	2%	100%	41%
Activities of holding companies	N/A	0%	0%	N/A	100%	78%	N/A	N/A	N/A	N/A	N/A
Real estate activities	48%	67%	3%	67%	29%	40%	100%	100%	3%	100%	40%
Professional, scientific and technical activities	26%	72%	3%	42%	33%	70%	100%	N/A	1%	100%	44%
Activities of head offices	23%	N/A	N/A	49%	35%	79%	100%	N/A	N/A	N/A	N/A
Management consultancy activities	19%	N/A	N/A	38%	33%	66%	100%	N/A	N/A	N/A	33%
Administrative and support service activities	38%	57%	12%	31%	36%	83%	100%	100%	3%	100%	45%
Education	20%	72%	7%	48%	11%	34%	100%	N/A	1%	100%	30%
Human health and social work services	50%	39%	4%	N/A	20%	47%	100%	N/A	1%	100%	36%
Arts, entertainment and recreation	33%	63%	7%	N/A	13%	58%	100%	100%	1%	100%	29%
Other service activities	39%	63%	7%	32%	29%	45%	100%	100%	0%	100%	27%



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