# The Covid-19 policy response in Croatia – a story of two leverages

Joint Vienna Institute:

“Policy Responses During and After Covid-19:

Dealing with Corporate Insolvencies, Debt Overhang and Loan Guarantee Schemes”

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# Disclaimer

The views expressed in this presentation are authors` alone and do not necessarily reflect the views of the Austrian National Bank or Croatian National Bank.

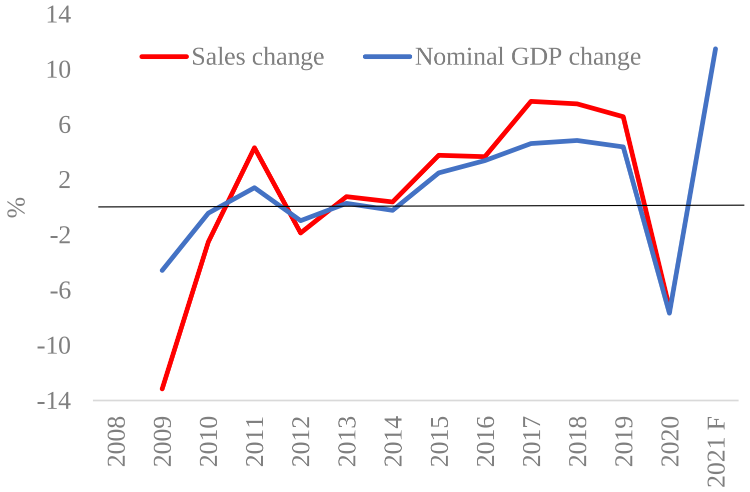
# Agenda

1. Introduction - COVID-19 and policy reaction
2. Loan moratoria (Financial leverage)
3. Employee support (Operating leverage)
4. Conclusion

# 1. Introduction - COVID-19 and policy reaction

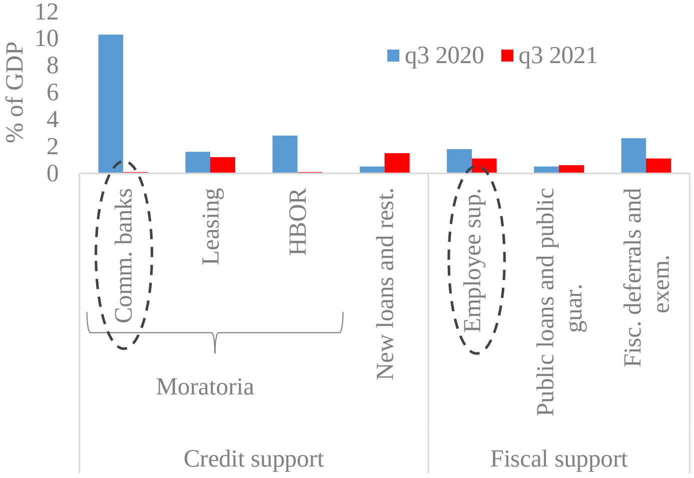
# Sizeable support package implemented to mitigate fall in economic activity

## Corporate sales decreased strongly (as expected)




Note: 2021 F depicts the HNB forecast from 9/21.
Source: FINA, HNB

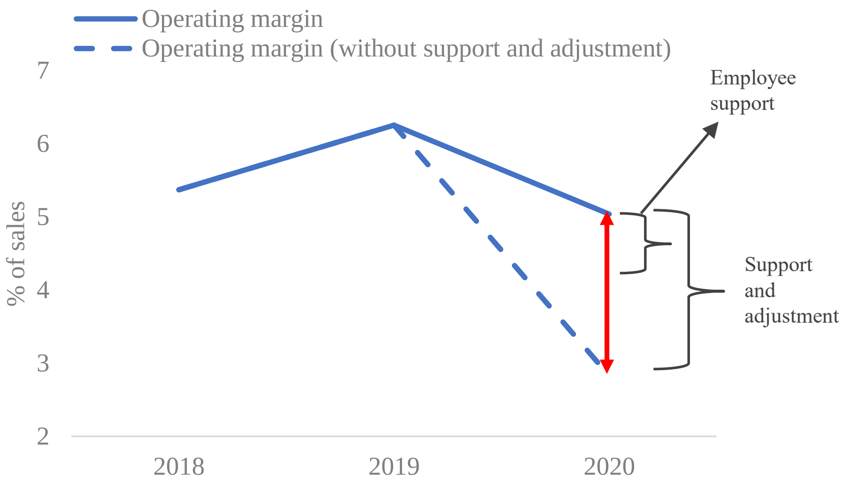
## Croatia implemented a sizable support package (primarily for the corporate sector)




Source: FINA, HNB, HBOR, Ministry of Finance, Croatian Employment Service

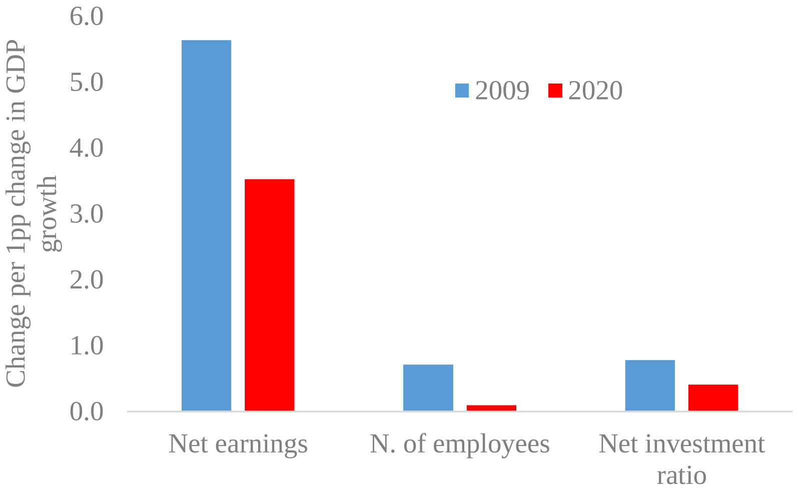
# Corporate performance in 2020 – better than expected

**The support allowed the corporate sector to record only a slight loss of profitability...**




Note: The simulation for 2020 was performed based on calculated fixed costs share and actual sales decrease without support or adjustment. Analysis is performed on all non-financial corporates that report to Financial Agency (around 133,000 companies in 2020)
Source: FINA, HNB (Authors` calculation)

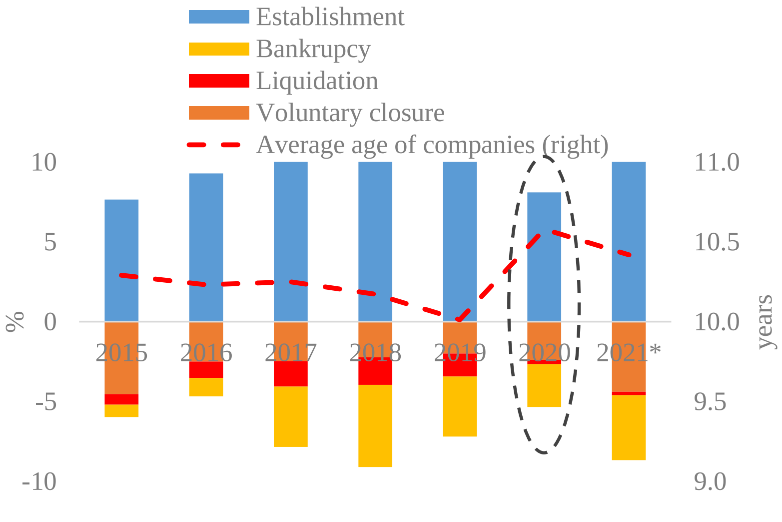
**... in spite of small adjustment compared with 2009**




Source: FINA, HNB (Authors` calculation)

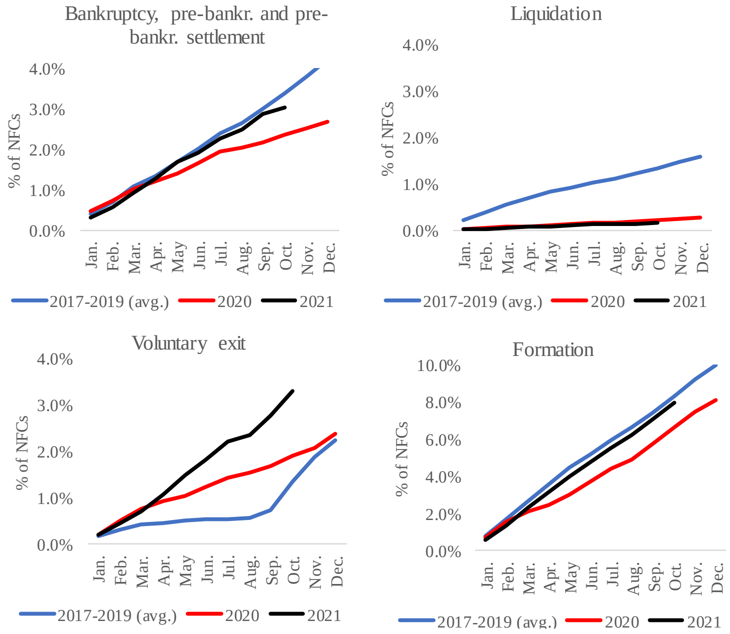
# Significant changes in the corporate demography during the pandemic

## Corporate entry / exit slowed down during the pandemic




Note: Data for 2021 refers to the annualised first three quarters.
Source: Court registry, HNB (Authors` calculation)

## With voluntary exits accelerating in 2021




Source: Court registry

# Why investigate this further?

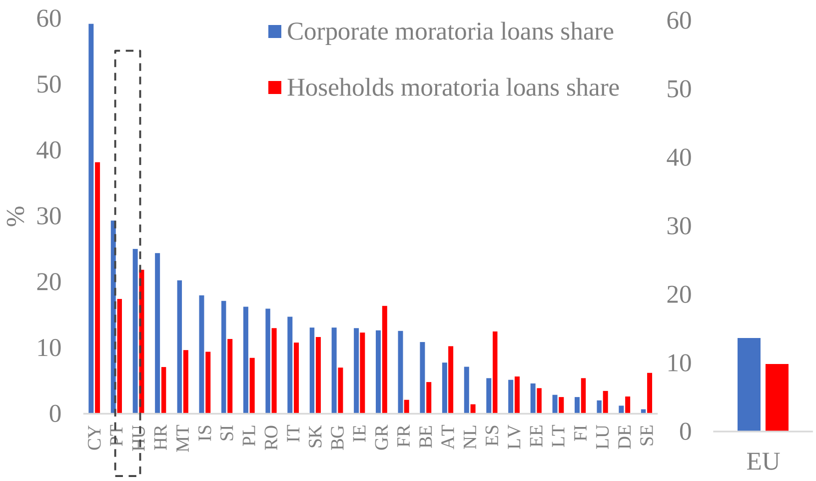
- The support package was broad-based and unprecedented – there are some strong indicators that it was effective (in the short run):
    - Economic growth rebounded strongly in 2021,
    - Production capacities were preserved.

- Several open questions regarding the effectiveness in the medium-term:
    - Corporate demography slowed down (the quality of an average company on the market might have deteriorated),
    - Measures were designed when the pandemic was expected to last „months", not „years".

## 2. Loan moratoria (Financial leverage)

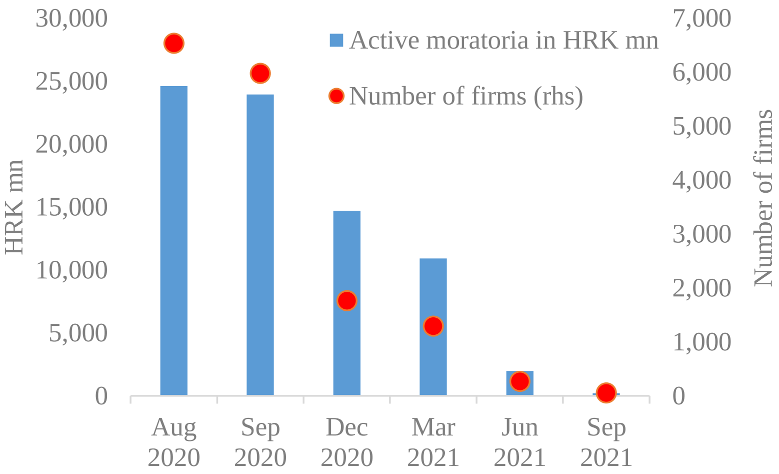
# Moratoria intended to mitigate uncertainty and liquidity concerns

**Croatian banks reported a high share of NFC loans under moratorium by international comparison**




Note: As of June 2020.
Source: EBA

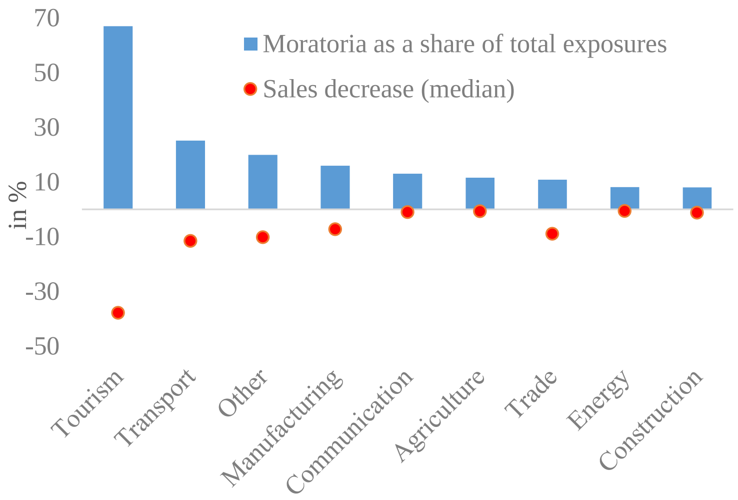
**Moratoria particularly important in the early phases of the pandemic**




Note: Aggregate reporting for moratoria to legal entities until June 2021, then reporting for individual non-financial corporations.
Source: FINA, HNB

# Moratoria on average used by more affected and vulnerable firms

**Moratoria found to a large extent in most affected sector: Tourism**




Source: FINA, HNB

Results/ marginal effects from probit regression of firm characteristics on moratoria dummy for Croatian firms:

**Probability of using the moratorium higher for firms:**

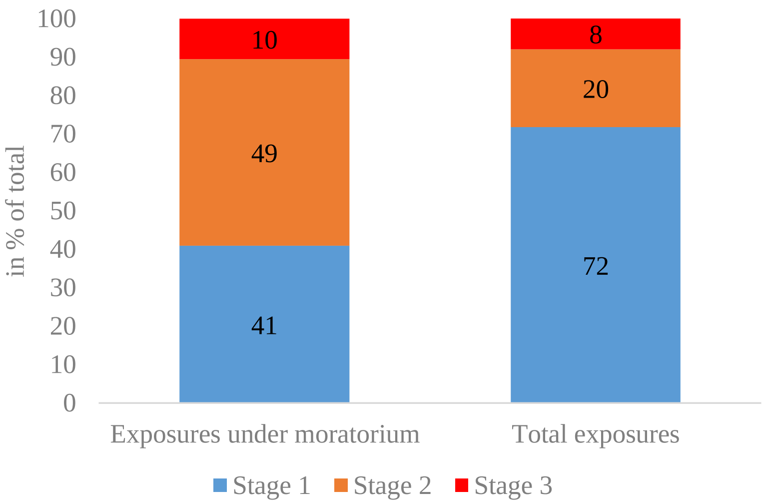
- **more affected** by the pandemic (larger drops in sales, most affected sectors)
- **more financially vulnerable** according to pre-pandemic indicators (higher debt ratio and implicit interest rate, lower profitability and liquidity buffers)
- using an **investment loan**
- with **stage 2 exposures** at end-2019

- Was there a Bank effect in moratoria?

# No distribution risks were observed in moratoria loans – the importance of criteria

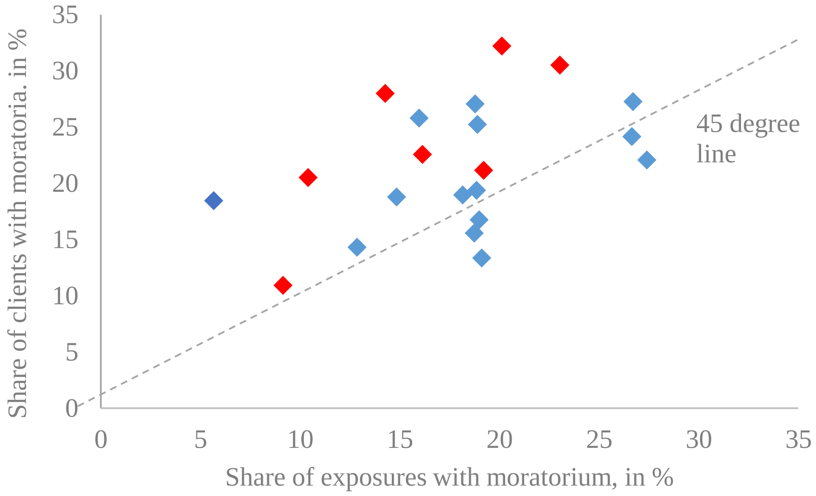


**Stage 3 exposures are not much higher among moratorium exposures than in the aggregate portfolio**




Note: As of June 2021.
Source: FINA, HNB

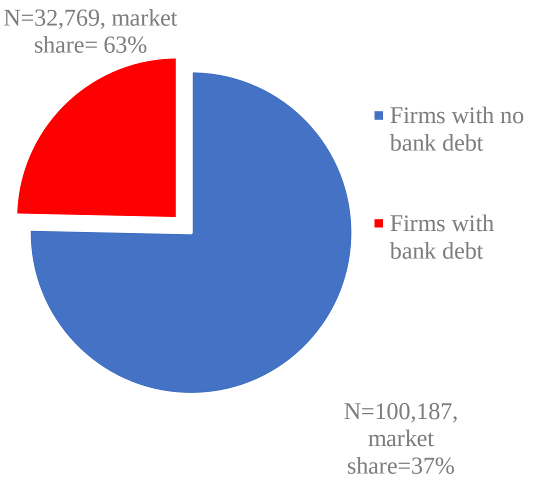
**Distribution of clients in moratoria – skewed towards smaller companies**




Note: O-SII institutions marked in red.
Source: FINA, HNB

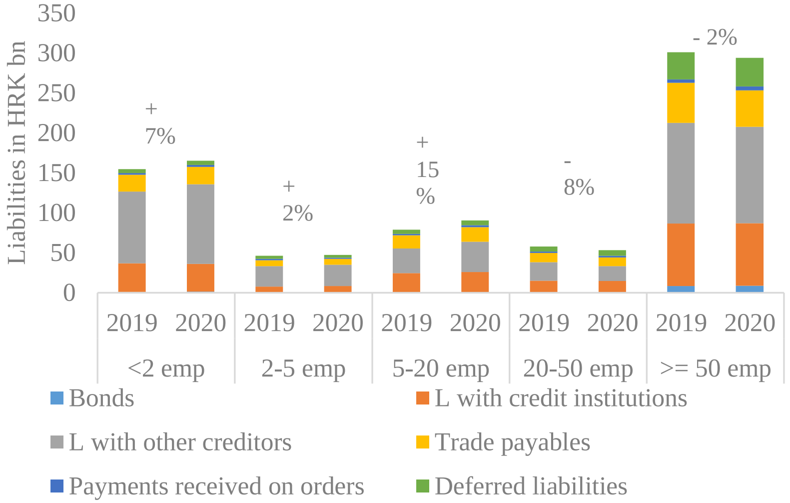
# However, moratoria have a limited scope

**Only a subset of companies have debt towards banks**




Source: FINA, HNB

**Overall moderate increases in liabilities in 2020, increases mostly in liabilities with other creditors**



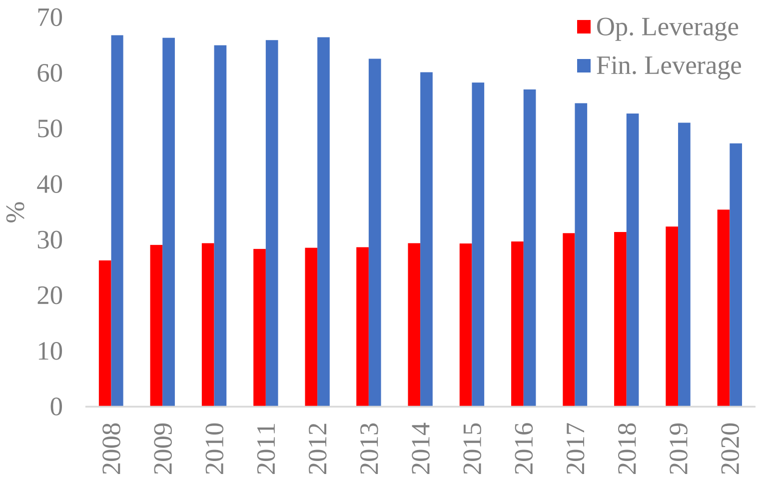

Source: FINA, HNB

# 3. Employee support (Operating leverage)

# Debt overhang? What about fixed costs overhang?

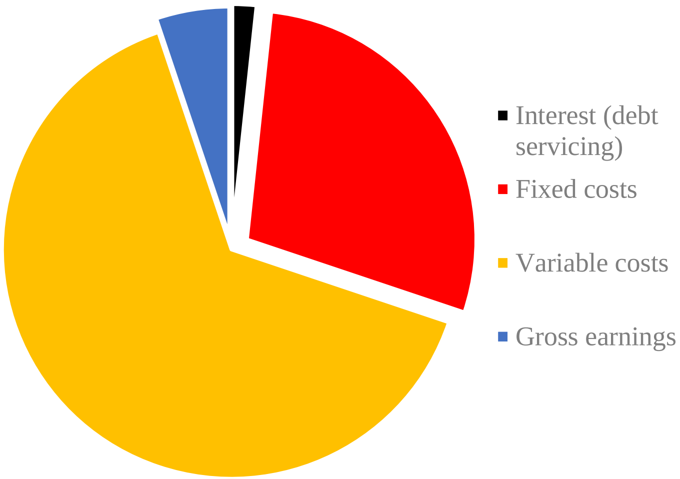


**Operating leverage increased while financial leverage decreased**




Note: Operating leverage is the share of fixed costs in total costs. Financial leverage is the ratio of debt over total assets.
Source: FINA, HNB (Authors` calculation)

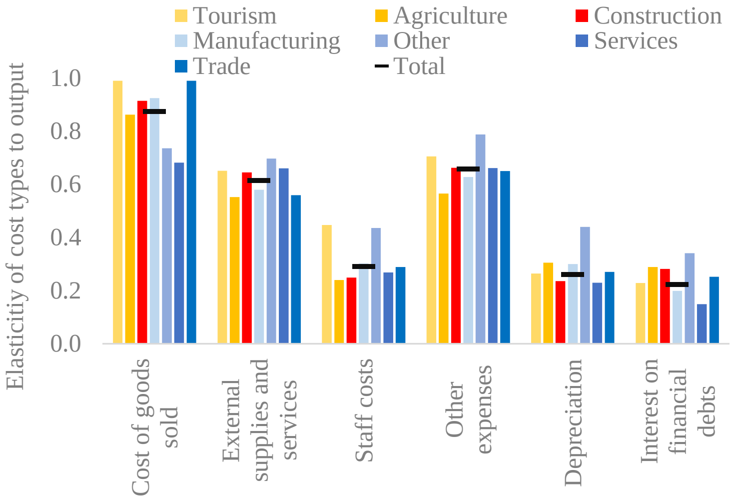
**The importance of fixed costs is often understated**




Note: Fixed costs are approximated with Staff and Depreciation costs, which have the lowest responsiveness to drops in sales in Croatia. Data refer to 2019.
Source: FINA, HNB (Authors` calculation)

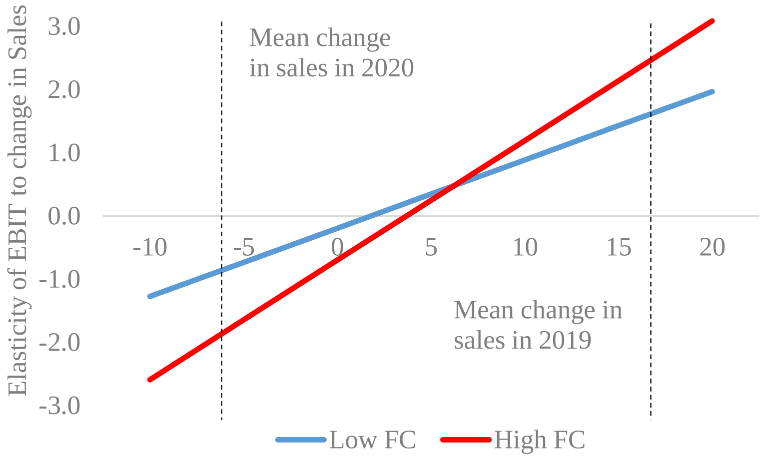
# Operating leverage - dangerous during „sudden-stops”

### Certain cost types don't react to output volumes




Note: Elasticities are estimated by sectoral regressions of the logarithmic change in sales and its interaction with a dummy for periods with sales contractios on the logarithmic change in costs. See Chen, Z., Harford, J., & Kamara, A. (2019). Operating leverage, profitability, and capital structure. Journal of financial and quantitative analysis, 54(1), 369-392.
Source: Allinger, Huljak (forthcoming): „The other leverage”

### Corporate operating leverage in Croatia (empirical)

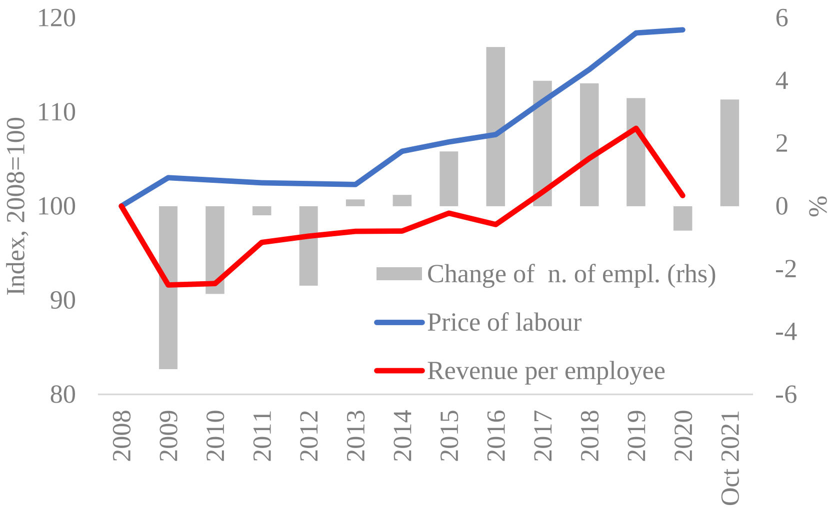



Note: Linear prediction of change in sales on change in EBIT (both scaled with average assets) for firms in different operating leverage terciles
Source: Allinger, Huljak (forthcoming): „The other leverage”

# Employee support – a vital element of corporate capacities and profitability preservation

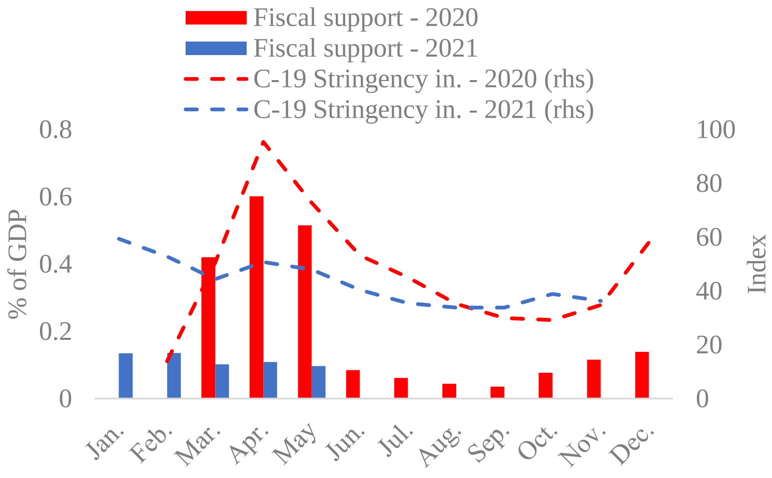


**Breaking the link between labour productivity and employment**




Note: Price of labor is imputed by the total wage costs over total employees.
Source: FINA, HNB (Authors` calculation)

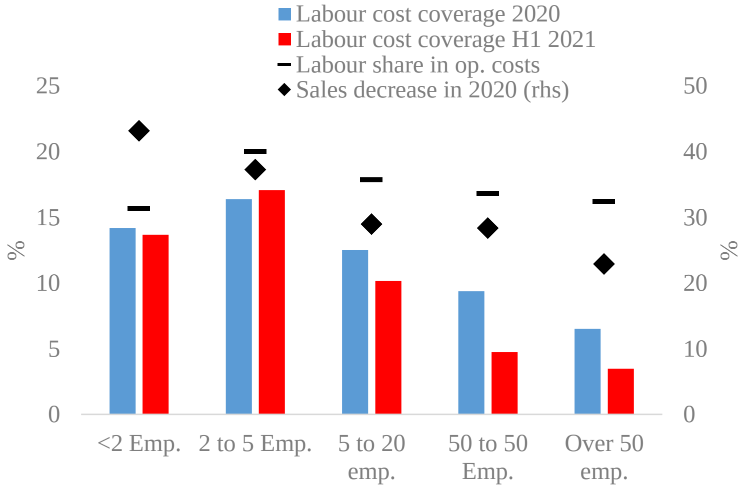
**Fiscal support over time correlated with the stringency of containment measures**




Source: HNB, Croatian Employment Service, https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker (COVID-19 Stringency index)

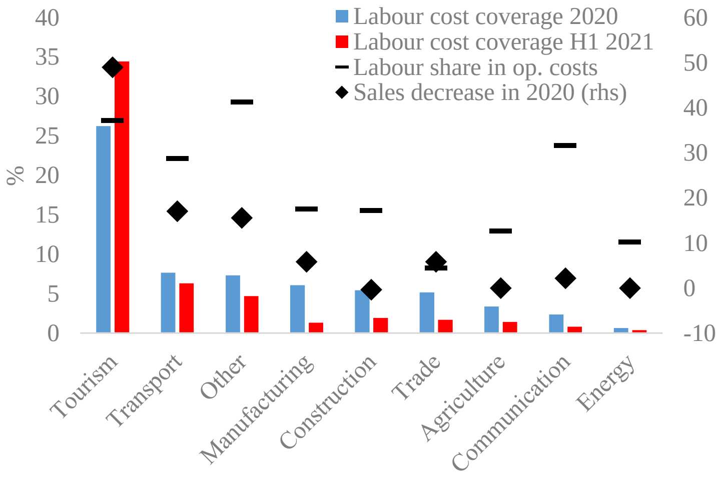
# Smaller firms and ones from activities requiring more physical contact received more employee support

**Smaller firms benefitted more (due to larger sales decreases and higher labour intensity)**




Source: FINA, Croatian Employment Service, HNB (Authors` calculation)

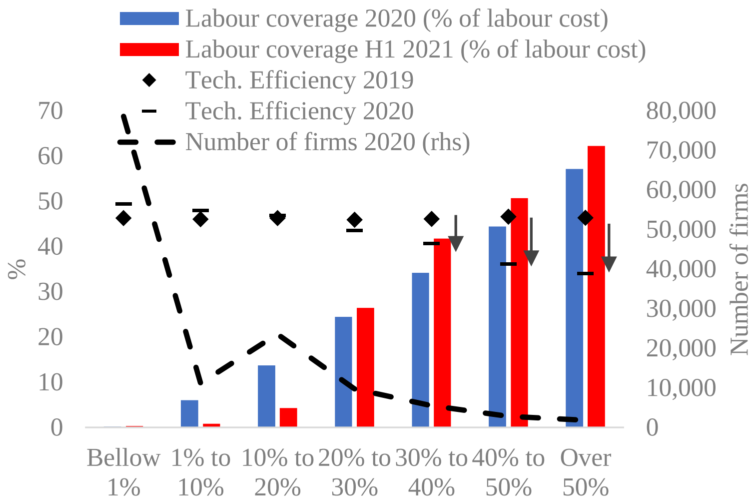
**Tourism was the main beneficiary of employee support due to the strong negative effect of Covid-19 containment measures**




Source: FINA, Croatian Employment Service, HNB (Authors` calculation)

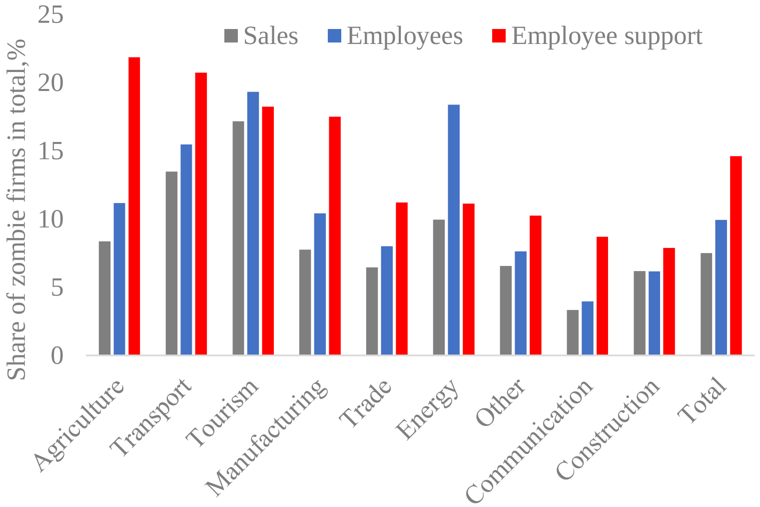
# Bankruptcy gap? What about the efficiency gap?

## Efficiency gap widens – normal finding for 2020/2021




Note: Technical efficiency is calculated according to Kumbhakar, E. G., Tsionas, S. C. (2012): Firm Heterogeneity, Persistent and transient Technical Inefficiency: A generalized True Random Effects model, Journal of Applied Econometrics, 29/1
Source: FINA, HNB (Authors` calculation)

## Share of employment support to non-viable companies higher than their share in employment or sales

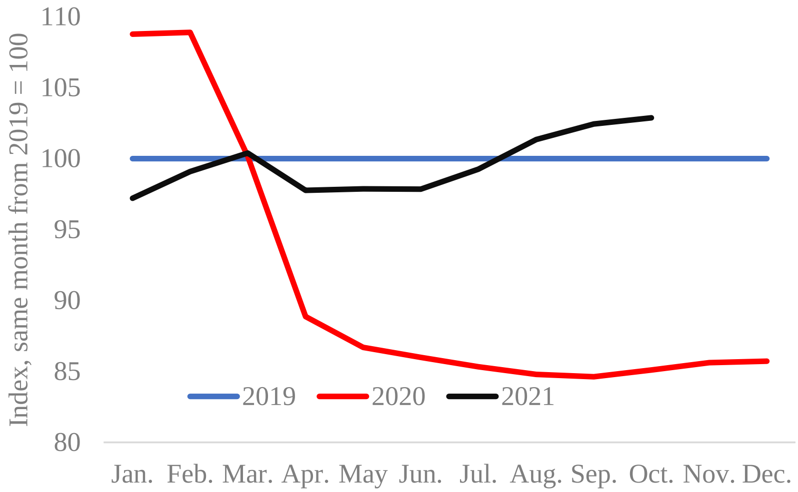



Note: Non-viable companies are identified according to Interest coverage criteria (not being able to cover for imputed 5% interest for three years in a row). Data for 2020 is depcited.
Source: FINA, HNB (Authors` calculation)

# 4. Conclusion

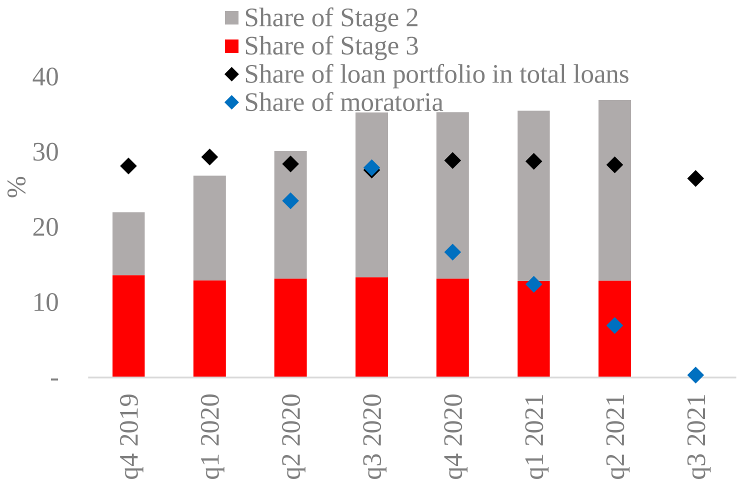
# Support measures effectiveness – too early to make an assessment?

**Corporate revenue recovered strongly in 2021 – preservation of capacities surely helped**




Note: The graphs shows the amount of fiscal receipts – historically a good proxy of corporate Sales.
Source: Ministry of Finance (Fiscal receipts)

**NFC Loan portfolio quality remained stable**




Note: Stage 3 loans are corrected for NPL sales.
Source: HNB (Authors` calculation)

# Conclusion



- Developments from 2020-2021 exposed the sensitivity of the corporate sector to a sudden stop in business activity. The support package helped in the preservation of capacities and liquidity; however, it is still early for the assessment of effectiveness in the medium term.

- Shocks from climate events or supply chains disruptions would generate effects on corporates similar to the pandemic effects (more than the financial shocks). Therefore, monitoring the operating leverage (the burden of fixed costs) is important.

- Identifying best practices among the various designs of policy support across countries usually takes time and effort. However, we should learn faster!!!

Thank you for your attention !!!

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