

# FIRMS' REACTION TO THE PANDEMIC AND POLICY INITIATIVES

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NUNO ALVES |

ECONOMICS AND RESEARCH DEPARTMENT



BANCO DE  
PORTUGAL  
EUROSISTEMA

A background image featuring a dark blue gradient. On the left side, there is a cluster of white Scrabble tiles with blue letters and numbers. The tiles are scattered and overlapping, with some showing letters like 'A', 'U', 'L', 'Z', 'P', 'D', 'O', 'G', 'J', 'A', 'M', 'N', 'S', 'E', 'U', 'I', 'K', 'A', 'V', 'A', 'O', 'I'. The text 'EVIDENCE ON PORTUGUESE FIRMS' is overlaid in white, sans-serif font on the left side of the image.

# EVIDENCE ON PORTUGUESE FIRMS



## ANALYSIS CARRIED OUT AT BANCO DE PORTUGAL

Analyses arise from the **interplay between data availability and analytical tools**

### **Data:**

- Firm's VAT declarations data (timely),
- Ad-hoc survey on firms
- Quarterly balance sheet data with a representative sample of firms
- Full-fledged balance sheet and income statement data (yearly)

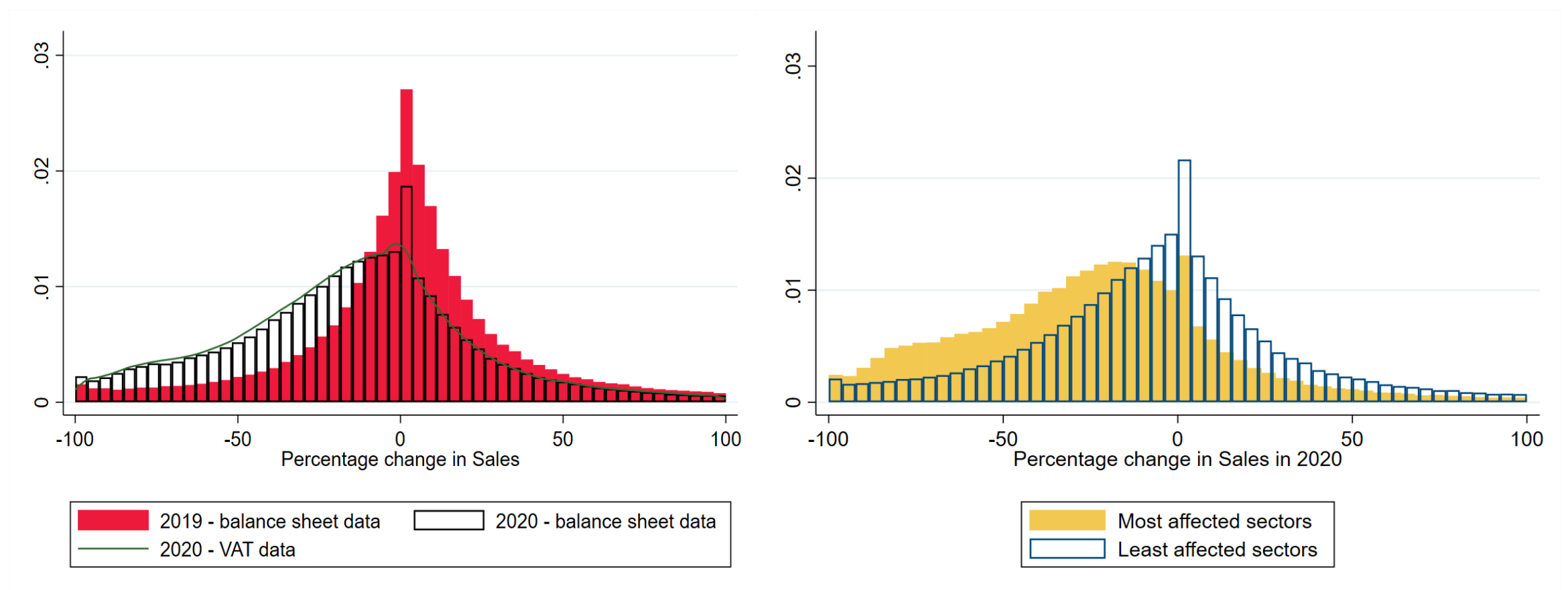
### **New analytical tools:**

- Daily economic indicator
- Dynamic structural model to assess the endogenous response of firm-owners to the shock and the policy measures...



# THE PANDEMIC SHOCK WAS STRONG AND ASSYMETRIC

**The pandemic was the strongest shock in the lives of many firms,** notably those operating in the most affected sectors (trade, accommodation and food services, transportation, recreation, ...)

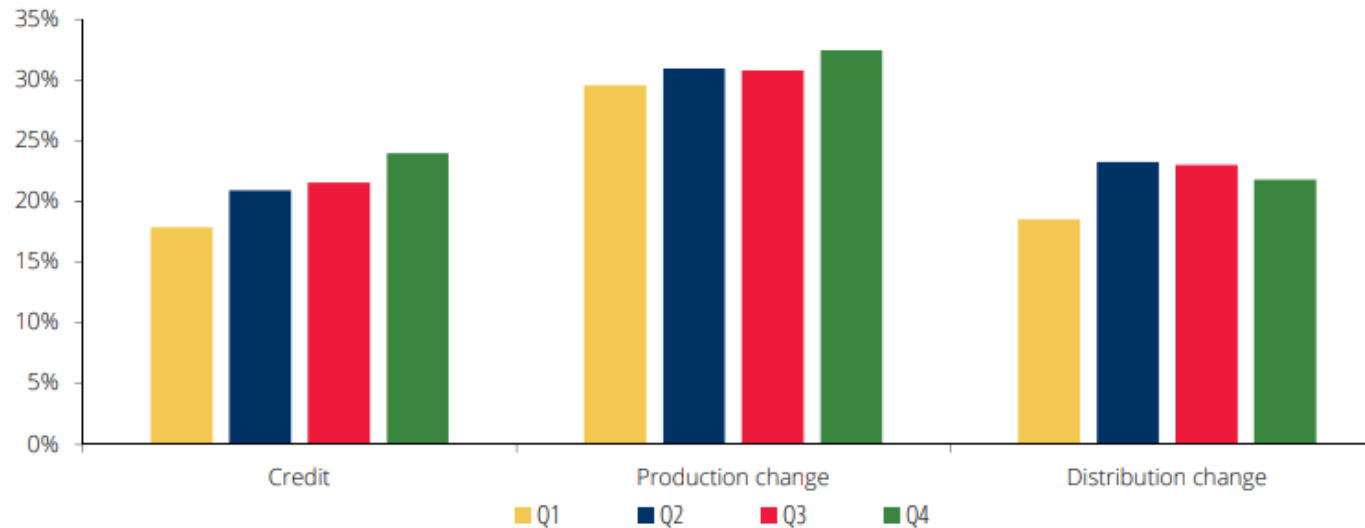




## FIRMS REACTED TO THE PANDEMIC SHOCK IN SEVERAL WAYS

Some notable changes: increased access to credit, changes to production, changes in distribution channels and recourse to teleworking

**Share of firms increasing their credit and changing their products by growth quartile | Percentage**



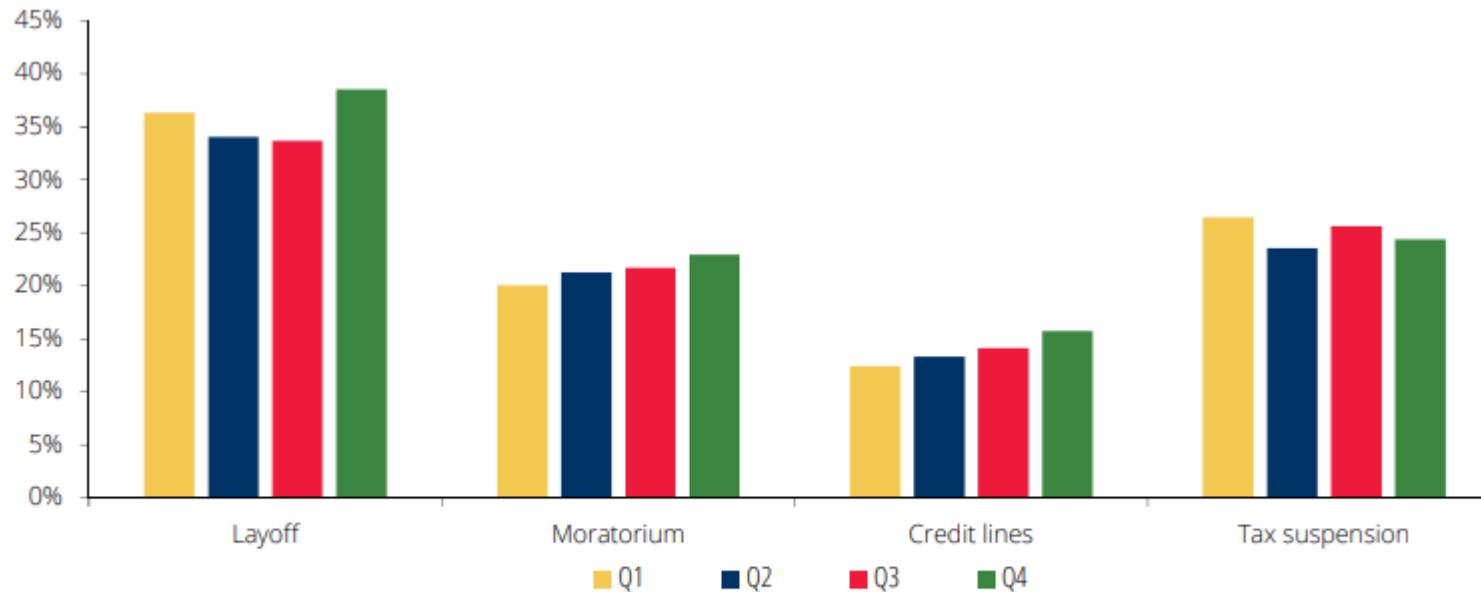
Source: Inquérito Rápido e Excepcional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms who: increased their use of bank or other credit as a result of the pandemic; modified or diversified their production; and altered or reinforced their distribution channels. These questions were only asked in some weeks of the IREE survey, so the sample is restricted accordingly. Firms were asked about credit in April and May. Questions about changes to production and distributions were in the middle two weeks of April. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

# THE TAKE-UP OF GOVERNMENT SUPPORT MEASURES WAS OF THE ESSENCE



Firms using at least one support measure represented around 50% of Portuguese gross value added and 60% of total employment

Share of firms using government support policies by growth quartile | Percentage



Source: Inquérito Rápido e Excepcional às Empresas—COVID-19 and Informação Empresarial Simplificada. | Notes: This figure presents the share of firms using four government support policies, by growth quartile. A firm is classified as having used a particular policy if it reports using that policy at least once during the course of the IREE survey. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

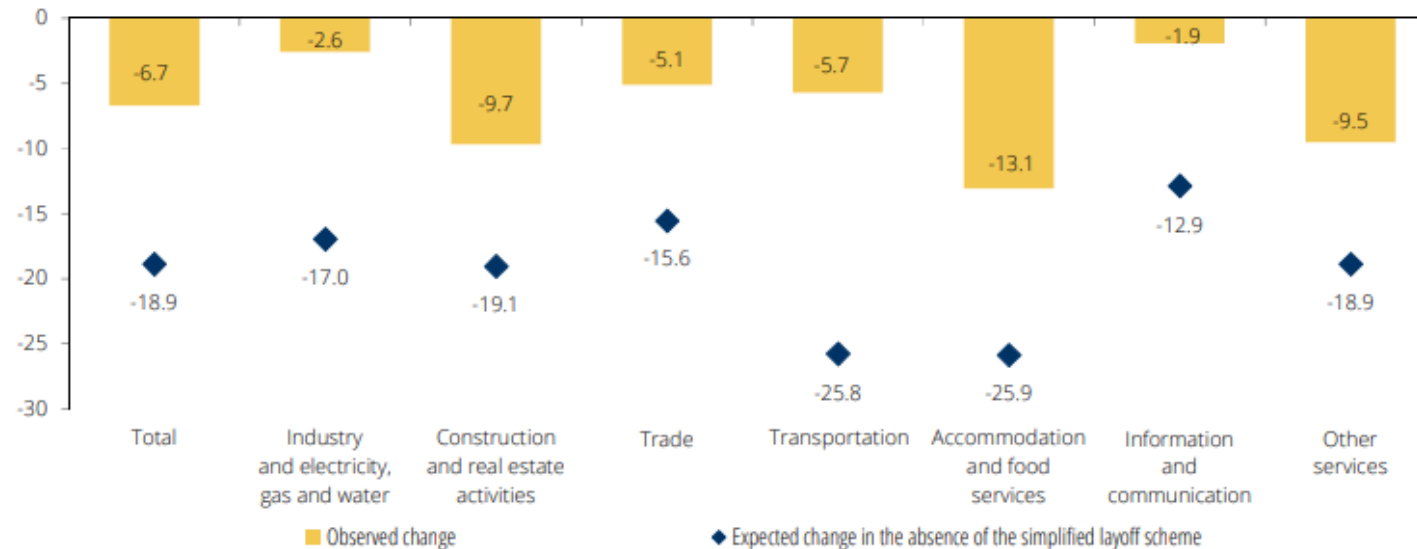
Source: Banco de Portugal Economic Bulletin December 2020



## POLICY EVALUATION: THE SIMPLIFIED LAY-OFF SCHEME

Building a credible counterfactual is difficult in real time; an ad-hoc question on the COVID survey of firms aimed at addressing this question

**Employment in beneficiary firms – observed change and expected change in the absence of the “simplified layoff” scheme, by sector of activity | Percentage**



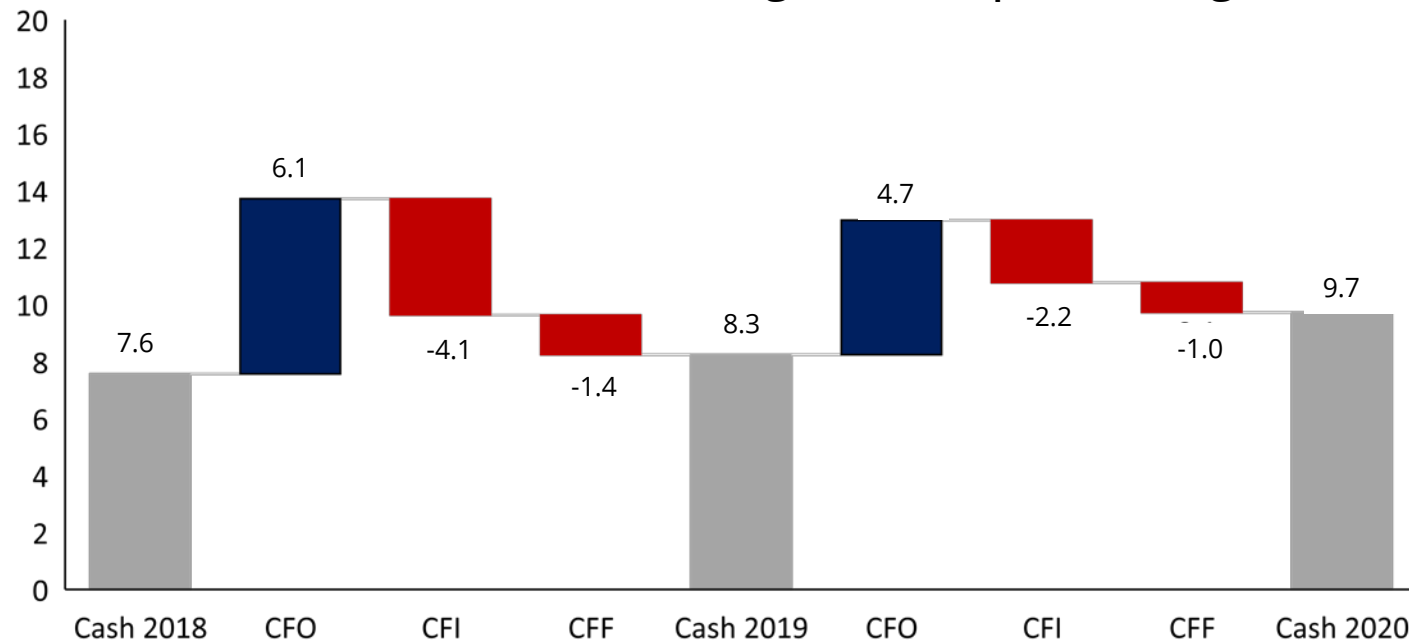
Sources: Statistics Portugal and Banco de Portugal (COVID-IREE). | Notes: The results are based on the COVID-IREE answers to the questions about the observed change in employment and the expected change in the absence of the "simplified layoff" scheme, from the beginning of the pandemic until the first half of July. The Total covers only the NACE sections presented: B-E (Industry and electricity, gas and water); F and L (Construction and real estate activities); G (Trade); H (Transportation); I (Accommodation and food services); J (Information and communication); M-N and P-S (Other services).



## EVOLUTION OF LIQUIDITY THROUGHOUT THE PANDEMIC

Cash increased despite the decrease in operating cash flows. The decrease in investment (CFI) and the increase in financing (CFF) more than mitigated the impact of the decrease in operating cash flows (CFO)

**Contributions to firms' annual change in cash | Percentage of assets**







# THERE WAS AN INCREASE IN CASH FOR FIRMS IN BOTH THE LEAST AND THE MOST AFFECTED SECTORS

But with different strategies...

## Comparing 2019 and 2020 | Values as a percentage of assets

	Firms in the <b>least</b> affected sectors	Firms in the <b>most</b> affected sectors
<b>Operating cash flows</b>	<b>-0.7</b>	<b>-5.1</b>
Gross margin	+1.1	-17.7
Supplies and external services	+0.6	-9.2
Employee expenses	+0.0	-1.6
Operating subsidies	+0.2	+1.2
<b>Investment</b>	<b>-1.8</b>	<b>-2.2</b>
<b>Financing (internal and external)</b>	<b>-0.2</b>	<b>+3.2</b>

## FROM LIQUIDITY TO LEVERAGE



Firms continued to deleverage as dividends were decreased (following a decline in net profits) and liabilities increased only slightly

Micro firms continued to deleverage, while large ones slightly increased leverage

Firms benefiting from moratoria and credit lines increased leverage, which was already above average. Moratoria and credit lines were mostly directed to firms that faced a severe decrease in operating cash flows and were to a large degree profitable before the pandemic crisis

Firms in the most affected sectors and those that took credit lines increased leverage.

The increase in leverage in the case of firms that benefited from moratoria and credit lines was mostly due to an increase in liabilities rather than losses

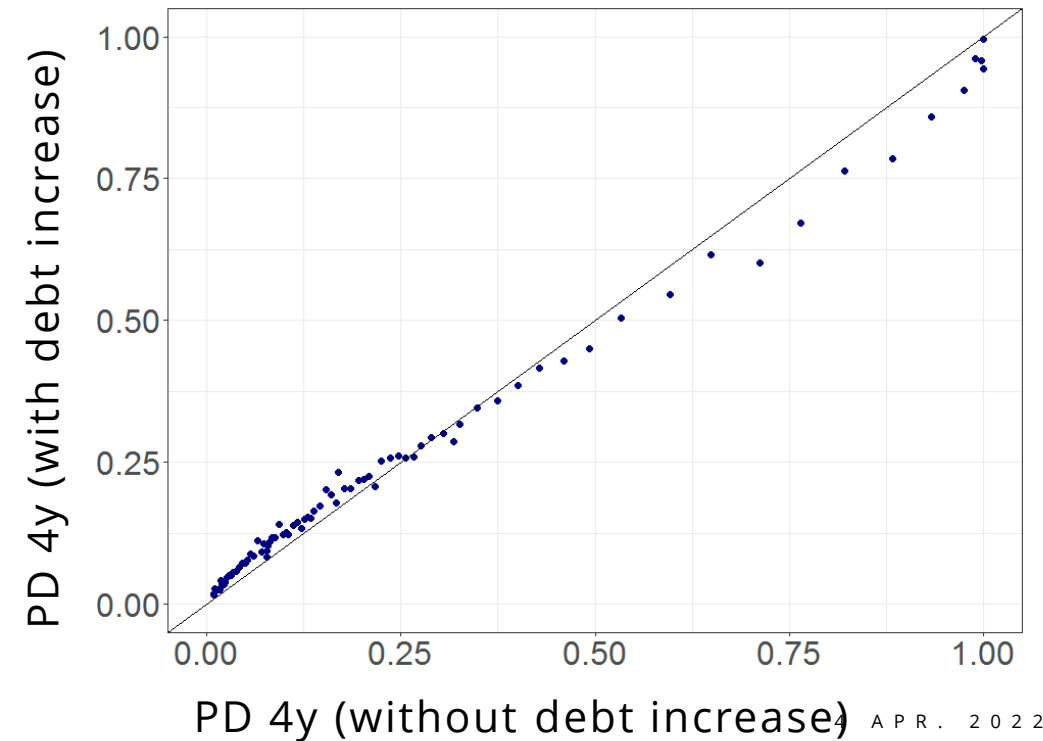
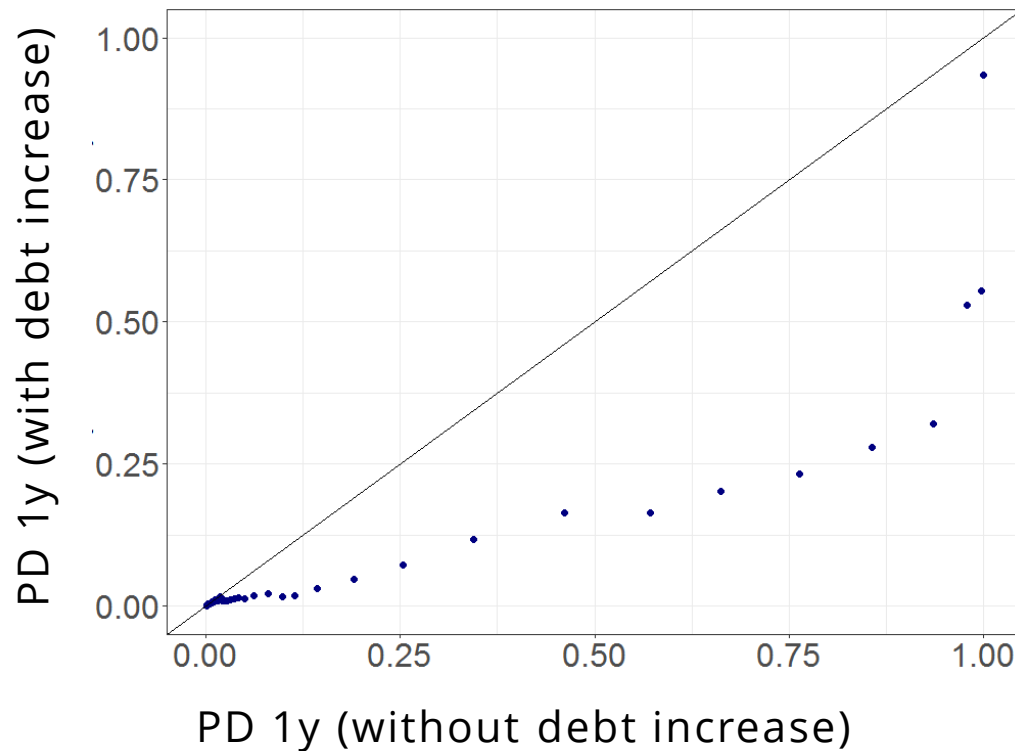
# INSIGHTS FROM A DYNAMIC STRUCTURAL MODEL OF CREDIT RISK



The model (N. Silva, 2021, mimeo) **endogenously establishes what is a viable firm**, considering the shareholders' behavior, notably their incentive to inject new funds in the firm, the cost structure, cost of capital, volatility of sales, cash reserves and debt

**Takeaway:** Increase in leverage may contribute to decrease probabilities of default in the short term but increase in the medium term

## Impact from increase in cash financed with additional debt



A background image featuring a collection of white Scrabble tiles with blue letters and numbers scattered on a dark blue surface. The tiles are arranged in a way that suggests a word search or a puzzle. The text 'OPEN QUESTIONS' is overlaid in white, sans-serif font on the left side of the image.

# OPEN QUESTIONS



# CHALLENGES AND OPEN QUESTIONS

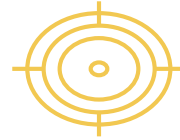


## ZOMBIES

Did public support keep unviable firms alive?

Apparently not (yet?).

Laeven et al. (2021)  
Demmou and Franco (2021)

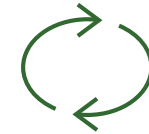


## RISKS TO FINANCIAL STABILITY

Increased debt levels.

But so far so good.

Altavilla et al. (2021)



## POLICY INTERACTIONS

Many measures implemented simultaneously.

How did they reinforce (or cancel) each other?

Acosta-Henao et al. (2021), Altavilla et al. (2020).

(SOME)

# EVIDENCE ON MEASURES ADOPTED IN EUROPE

**Harasztosi et al. (2021), EIB:** Support went to the **most affected firms**. **No** evidence of misallocation to **zombie** firms.



**Hurley et al. (2021), Barnes et al. (2021)**

Largest impacts on **younger SMEs** in consumer-oriented sectors. Difficulties in effectively **targeting** support.

Measures **eased credit**, but there is a large increase in the % of **vulnerable** firms.

**Blanco et al. (2021)**

**Moreira et al. (2022)**

**High productivity** firms were less likely to take up government support.

**Cœuré (2021), Bénassy-Quéré et al. (2021), Epaulard et al. (2021),**

**Take-up** was below expected; support mostly of **affected** firms; not many **zombies**. Less cleansing than normal, **heterogeneity** across and within sectors.

The image features a blue-tinted photograph of classical architectural columns. The columns are fluted and topped with ornate capitals, including acanthus leaves and volutes. The text "THANK YOU" is overlaid in white, bold, sans-serif capital letters in the center-right portion of the image.

THANK YOU