Capital Structure and Employee Consumption

Miguel Oliveira†

† Nova School of Business and Economics

Abstract

I show that firm capital structure can affect employee consumption and saving decisions using a new matched employer-employee data set from Portugal. Specifically, employees of highly leveraged firms exhibit lower marginal propensities to consume, particularly in non-essential goods and services. This effect cannot be attributed to a wage premium in these firms. I identify these effects by exploiting negative industry-wide shocks. I rationalize the findings using a Diamond-Mortensen-Pissarides matching model, where heterogeneous risk-averse employees bargain with heterogeneous employers to determine wages. Consistent with the model, low-wealth individuals are most affected due to their relatively higher unemployment costs. My results suggest that financial distress costs are partially shifted to employees.

Motivation

Financial leverage can impose significant costs on employees by increasing the likelihood of corporate bankruptcy. These costs could help us explain the low-leverage puzzle (Matsa, 2018):

$$\begin{aligned}\text{NPV(Debt Issuance)} &= \text{NPV(Interest Tax Shield)}\\ &+ \text{NPV(Financial Distress Costs)}\\ &+ \Delta\text{Labor expenses}\end{aligned}$$

For this to hold, it must be the case that:

- Employees understand/care about employer leverage
- Are compensated for earnings risk

Effect of leverage on wages is ambiguous, but if households recognize this risk then theory would predict changes in their **precautionary saving behavior**.

Data

First **matched employee-employer data set** built directly from bank records.

- Anonymized transaction-level data from a large Portuguese bank
  - About 1% of Portuguese households
  - Consumption, saving, borrowing, and income
  - From January 2018 to June 2022
- Accounting data for all private-sector employers
  - About 14,000 employers
  - Both public and private firms
- Labor market tightness at the industry-region-month level
- Use of exogenous industry-wide revenue shock at the industry-month level
- Why Portugal?
  - Unique data
  - Able to isolate earnings risk, no healthcare or pension risk

Do corporate financing decisions change household consumption/saving behavior?

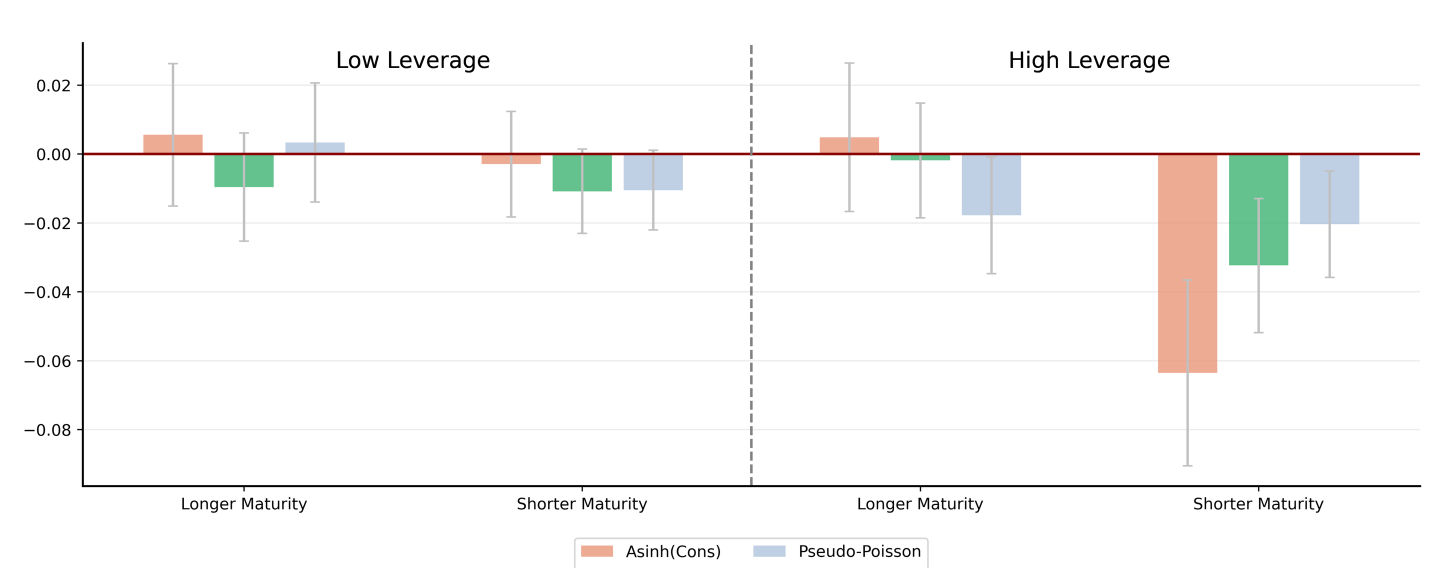
- Households working for highly leveraged firms exhibit **lower MPCs** (higher MPSs), despite earnings less:

	Consumption				
	(1)	(2)	(3)	(4)	(5)
Total Income	0.073***	0.115***	0.112***	0.108***	0.071***
	(0.002)	(0.013)	(0.014)	(0.014)	(0.002)
× Leverage	-0.006*	-0.006***	-0.008***	-0.009***	
	(0.003)	(0.002)	(0.002)	(0.003)	
× Public Sector					0.007**
					(0.003)
Additional Controls	No	Yes	Yes	Yes	No
Month × Year FE	Yes	Yes	Yes	Yes	Yes
Household FE	Yes	Yes	Yes	No	Yes
Industry × Year FE	No	Yes	Yes	Yes	No
Employer FE	No	No	Yes	No	No
Household × Employer FE	No	No	No	Yes	No
R^2	0.550	0.551	0.556	0.560	0.538
Observations	2,356,500	2,336,140	2,335,933	2,334,414	4,428,016

- Moving from an employer on the bottom decile of the leverage distribution to one on the top decile reduces MPC by about 7%.
- Highly **heterogeneous effects**, with average effect driven by:
  - Low-wealth households
  - Highly volatile industries
  - Slack labor markets
- Results are not driven by selection originating from time-invariant characteristics of either the household or the employer.

Reaction to exogenous shock

- When exposed to an industry-wide revenue shock, measured at the monthly level, only those working for high-leverage firms cut consumption.
- Effect is driven by those working in highly leveraged firms with high fraction of short-term debt
- **Hypothesis**: firms are exposed to economic distress; only highly leveraged ones are further exposed to financial distress.



The propagation of financial distress across the economy

- Leverage changes consumption basket.
- Effect is driven by **non-essential goods**:
  - Clothing
  - Transportation
  - Restaurants and Hotels
- Highlights the importance of consumer-employee networks.

Search and Match Model

- I rationalize the results through a Diamond-Mortensen-Pissarides model:
  - Employee and employer heterogeneity
  - Employees are risk-averse, demand compensation
  - Leverage depresses pledgeable cash flow, used in bargaining
- When calibrated to the Portuguese economy, the model supports empirical findings on how leverage shapes consumption and wages.

Conclusion

⋆ I provide novel evidence on the **spillover effects** of capital structure choices on employees, using a matched employer-employee data set.

⋆ Employees facing higher **earnings risk** due to corporate leverage exhibit **precautionary saving behavior**.

⋆ Evidence suggests that **employee-consumer networks** might be important in explaining the **propagation** of financial distress shocks.

Contact

Email: miguel.farinha.oliveira@gmail.com

Full Paper **Webpage**

*I am deeply grateful for the comments and encouragement provided by Fernando Anjos, Miguel Ferreira, Irem Demirci, and Manuel Adelino. Additionally, I thank Nick Flamang, Rui Silva, David Matsa, Isaac Hacamo, Ilona Babenko, Kristine Sahakyan, Ekaterina Gavrilova, Virginia Gianinazzi, and seminar participants at the Nova School of Business and Economics and the Finance PhD Final Countdown 2024. This work was funded through FCT - Fundação para a Ciência e Tecnologia (SFRH/BD/146215/2019).