



Discussion of Covid-19 and SME failures

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Model Covid corporate failures in 17 sectors across 17 countries

Table 3: Sector SME Failure Rates

	(1) Non-COVID	(2) COVID	(3) Δ
Agriculture	9.39	13.97	4.58
Mining	10.17	34.56	24.39
Manufacturing	8.64	16.94	8.30
Electric, Gas & Air Con	10.41	11.79	1.38
Water & Waste	6.96	10.32	3.36
Construction	7.26	9.38	2.12
Wholesale & Retail	9.20	19.42	10.22
Transport & Storage	8.25	14.17	5.92
Accom. & Food Service	12.81	38.54	25.72
Info. & Comms	9.98	15.83	5.85
Real Estate	11.31	18.10	6.79
Prof., Sci., & Technical	10.17	18.89	8.73
Administration	8.55	20.62	12.08
Education	10.56	29.54	18.98
Health & Social Work	8.51	11.78	3.27
Arts, Ent., & Recreation	12.98	39.18	26.20
Other Services	13.38	33.89	20.51

Table 5: Country-Level SME Failure Rates

	(1) Non-COVID	(2) COVID	(3) Δ
Belgium	8.16	15.11	6.96
Czech Republic	8.25	13.04	4.78
Finland	9.20	17.55	8.35
France	9.87	18.46	8.59
Greece	9.86	15.22	5.37
Hungary	8.64	15.30	6.66
Italy	9.39	22.59	13.20
Poland	11.53	21.19	9.66
Portugal	11.99	19.59	7.61
Romania	14.08	21.90	7.82
Slovak Republic	10.12	15.38	5.25
Slovenia	7.27	17.26	9.99
Spain	8.50	15.32	6.82

And compare the costs and benefits of government support policies

- The missing bankruptcies paradox

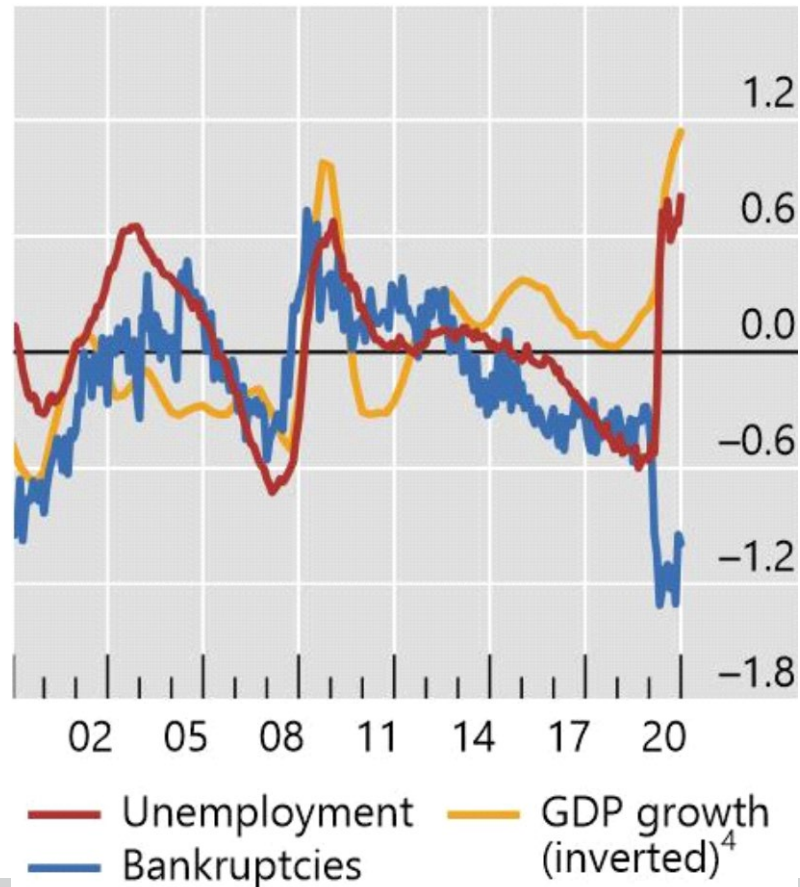


Table 8: The Impact and Costs of Various Policy Options

	(1)	(2)	(3)	(4)	(5)
	Firms Saved (% Firms)	Jobs Saved (% Employed)	Wages Saved (% GDP)	Loans Saved (% Loans)	Funds Disbursed* (% GDP)
Benchmark Policy	9.06	4.64	1.12	8.40	0.78
Financial Expenses Waived	1.28	0.52	0.14	4.54	1.29
Tax Waiver	1.90	0.65	0.10	2.63	1.44
Rent Waiver	3.05	1.63	0.40	2.15	3.13
Cash Grant	5.60	3.26	0.74	3.28	2.38
Pandemic Loans	8.56	4.59	1.06	5.79	5.82

All rest on a model: each firm is shocked with country/sector specific profile

Figure 2: Supply Shock by Sector

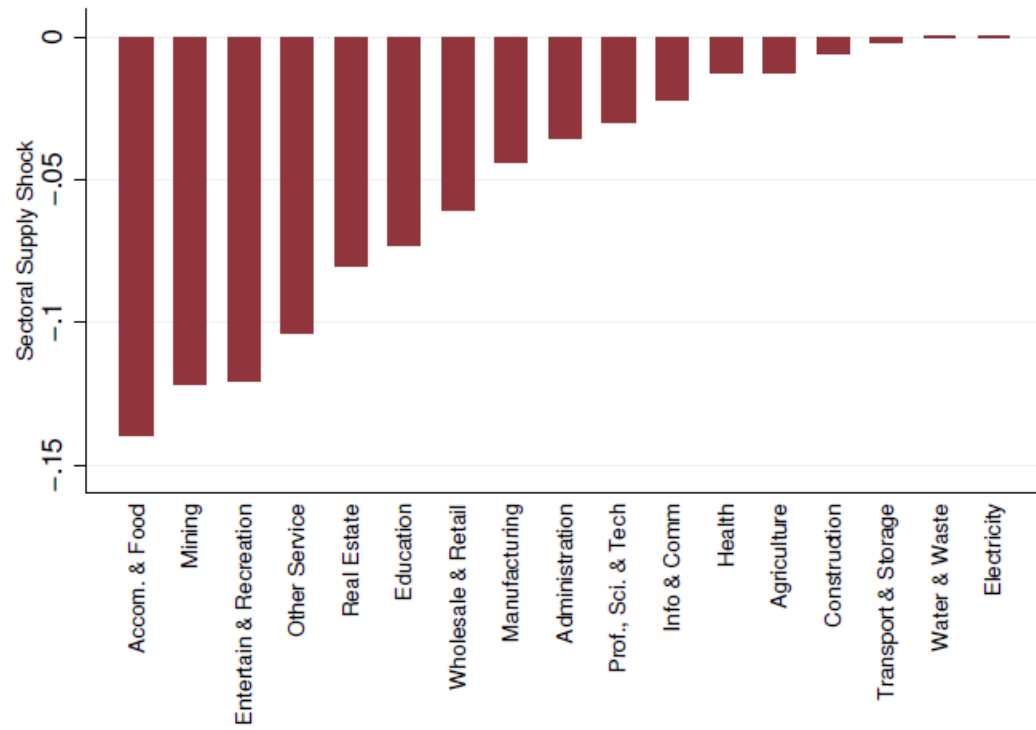
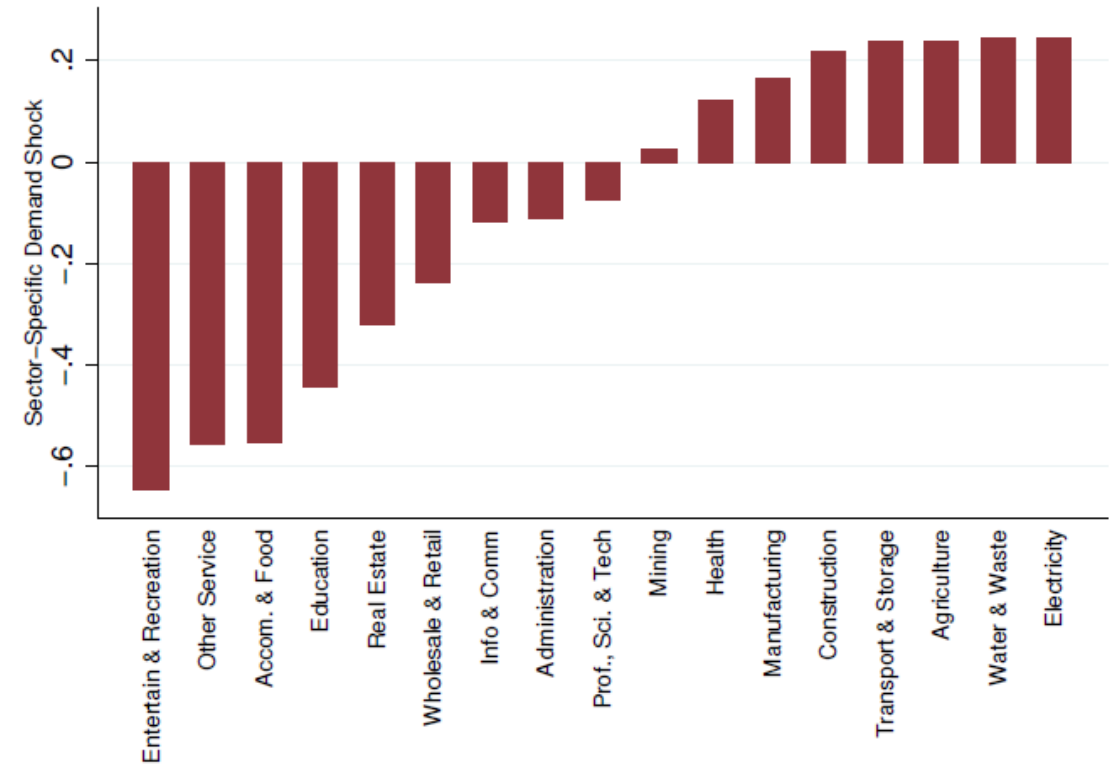


Figure 3: Demand Shock by Sector



Comments

1. Can we validate the model? What financial factors determine firm failures?
2. Business failures, postponed or cancelled?
3. Near-term corporate sector challenges
 - Firm failures
 - Business dynamism and investment

Comment # 1: Validity of firm failure condition, can we validate the model ?

- Why not estimate the determinants of bankruptcies in the data?
- Banerjee and Kharroubi (2020) studied this using Census based data show that 3 variables help predict bankruptcies: short-term debt, cash flow and Int. coverage and not cash holdings (more risky firms hold more cash)

The financial determinants of firm exits¹

Dependent variable: sectoral exit rate

Table 1

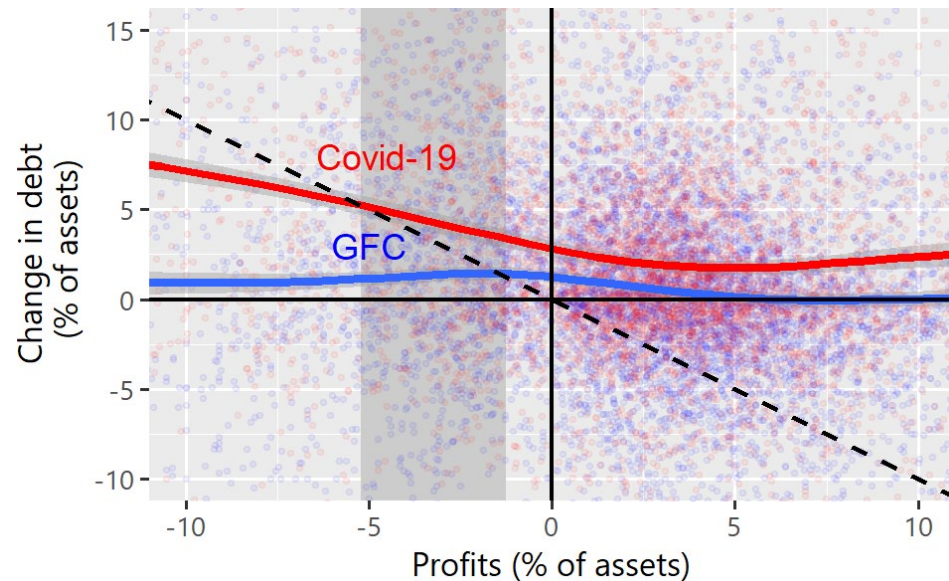
	<i>Liabilities</i>			<i>Liquid assets</i>		<i>Cash flow ratios</i>	
	Leverage ²	Short-term debt/ total assets	Long-term debt/ total assets	Current assets/ total assets	Cash/ total assets	ICR ³	Profits/ net debt
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Financial vulnerability measure_{t-1}</i>	0.219 (0.305)	0.333** (0.166)	-0.073 (0.262)	0.528 (0.336)	0.815 (0.583)	-0.773*** (0.269)	-0.258* (0.176)
Number of observations	1,894	1,894	1,894	1,894	1,894	1,894	1,894
R-squared	0.135	0.134	0.134	0.131	0.131	0.135	0.132

***/**/* indicates statistical significance at the 1/5/10% level, respectively.

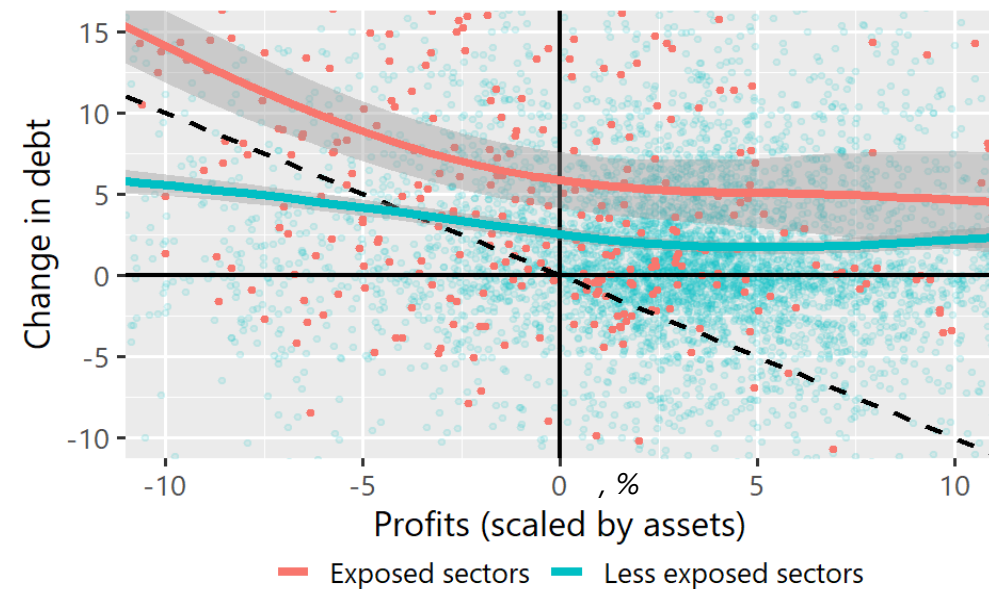
¹ Each column shows the regression estimates on the financial vulnerability measure, which is described in the column heading when each is included separately in the regression specification. All regressions include the following control variables: one year lagged exit and entry

Comment # 2: Business failures, postponed or cancelled?

Credit provision to loss making firms during Covid-19 significantly above GFC^{1,2}



...significantly higher for Covid-19 affected sectors^{1,3}

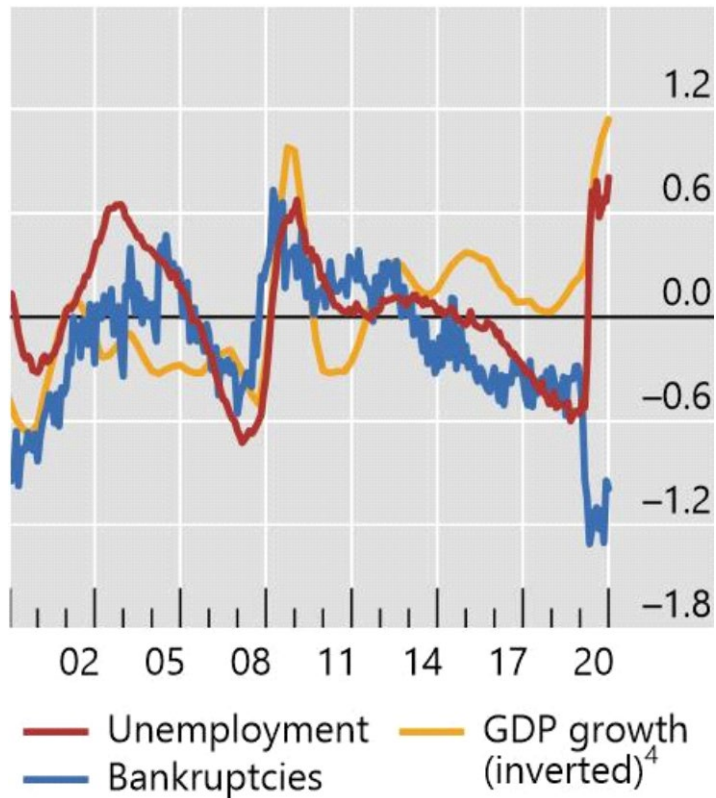


¹ Both panels are based on public and private companies in all non-financial sectors (Consumer Discretionary, Consumer Staples, Energy, Healthcare, Industrials, InfoTech, Materials, Real Estate, Telecom and Utilities) in ² Covid-19: change between Q4 2019 and Q3 2020. GFC: change between Q3 2008 and Q2 2009. ³ Covid-19 exposed sectors: Airlines, Hotel, Restaurants and Leisure, Entertainment, Textiles, apparel and luxury goods.

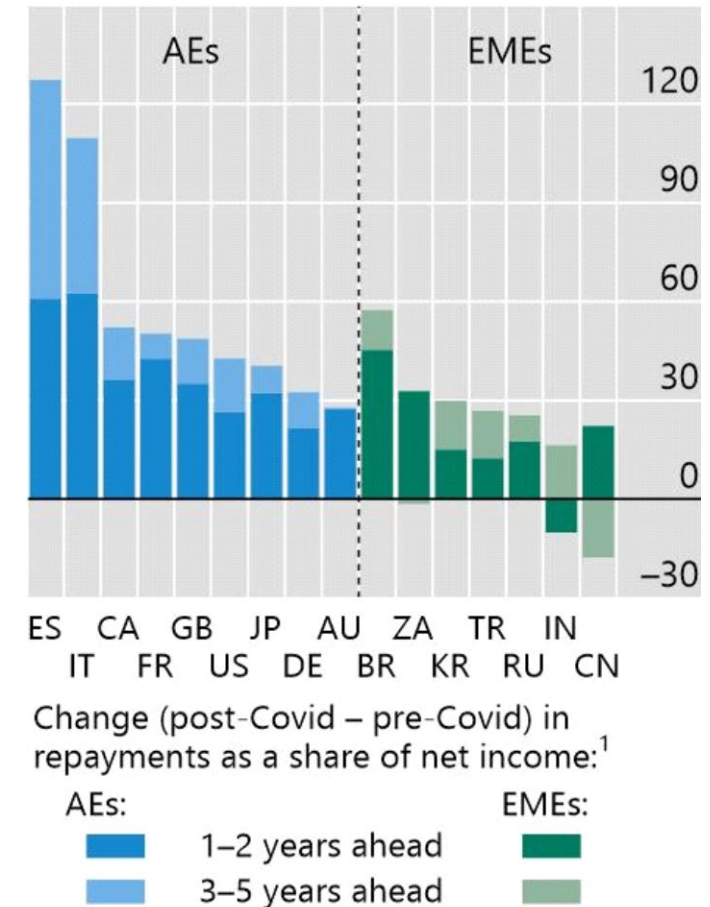
Sources: S&P Capital IQ; BIS calculations. [ADD COUNTRIES]

Comment # 2: Business failures, postponed or cancelled?

Disconnect between activity and bankruptcies



Large rise in short-term debt coming due in next two years

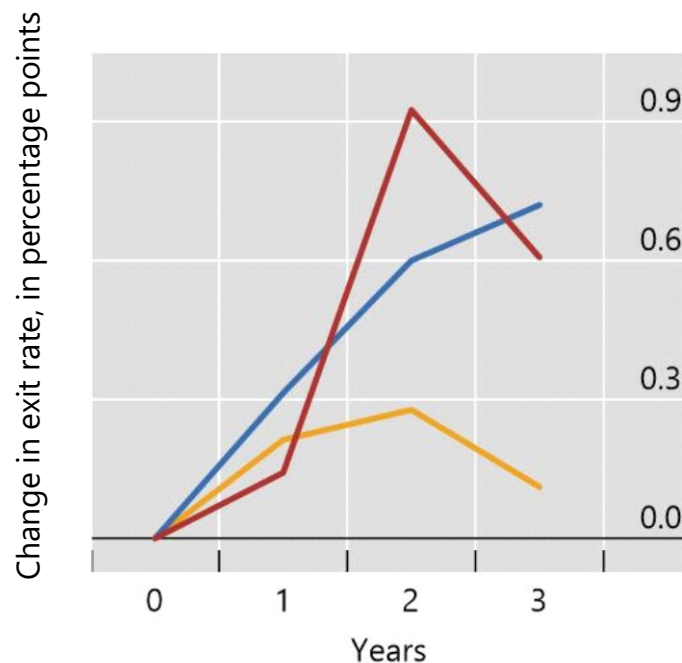


[Covid and beyond, Chapter 1](#), BIS Annual Economic Report 2021

- Failures avoided at cost of higher debt -> higher future rollover risk

Comment # 2: Business failures, postponed or cancelled? (cont'd)

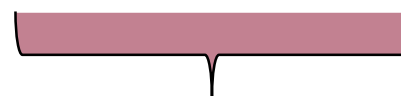
Delayed impact of financial vulnerabilities on exits



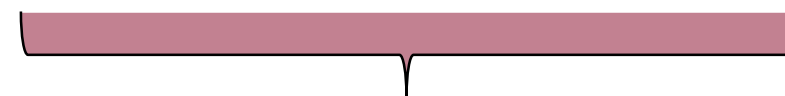
- Non-equity liabilities to total assets
- Short-term debt to total assets³
- Interest coverage ratio⁴

[Link to Banerjee and Kharroubi \(2020\)](#)

$Cash + cash\ flow < interest\ expenses + maturing\ debt$



2020 risk



2022/23 risk

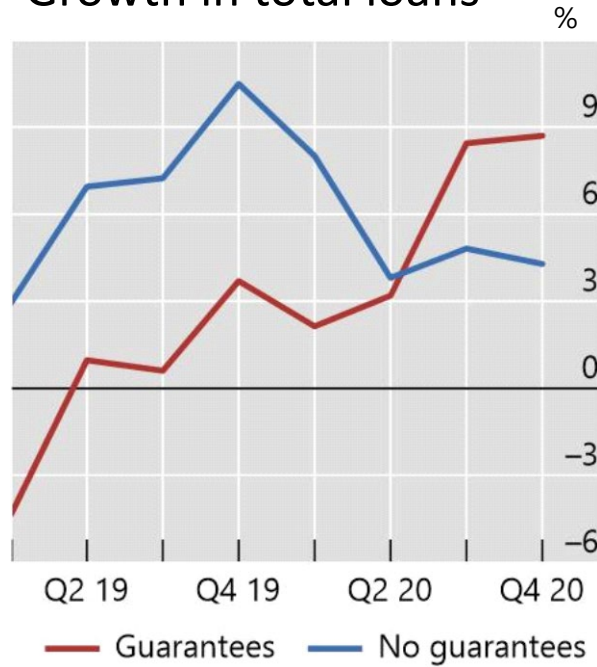
- Financial vulnerabilities take time before they translate into exits
- Based on historical relationships, danger zone in 2022/2023
- Financial conditions important determinant of this risk

Comment # 3: Near-term corp. sector challenges: rise in failures or weaker growth?

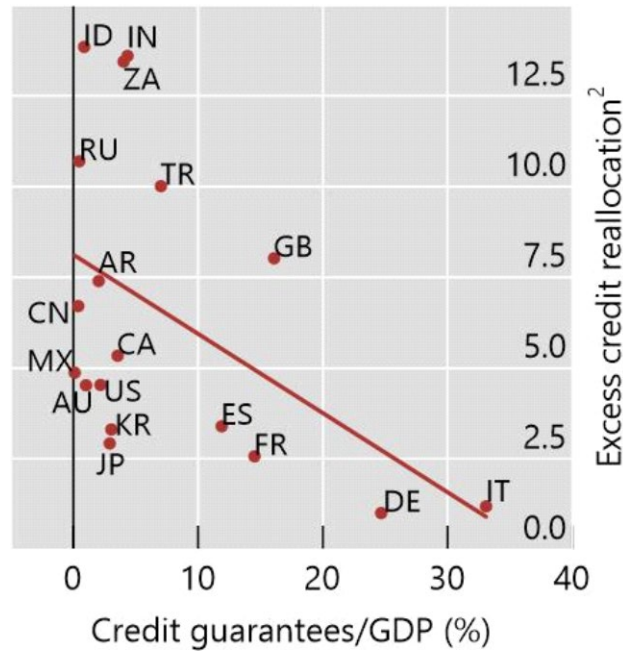
- The global economy sidestepped the bankruptcy spirals
- Going forward avoiding catastrophe may not be the most pressing issue
 - Especially as the spectre of widespread lockdowns appears to have receded
- What else could threaten the global recovery?
- Two factors likely to weigh on the recovery
 - Weak reallocation during the pandemic -> weigh on productivity
 - Debt overhang -> pull down corporate investment

Comment #3 : Risks going forward - weak reallocation

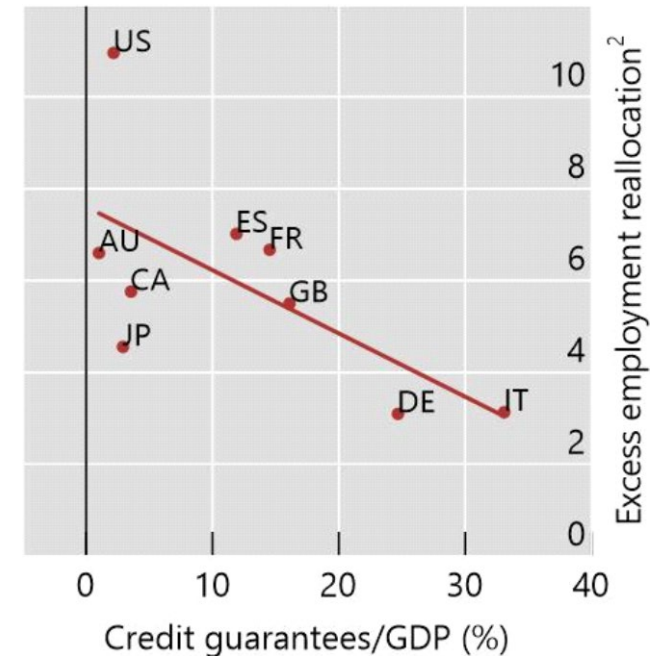
Growth in total loans



Credit reallocation



Employment reallocation

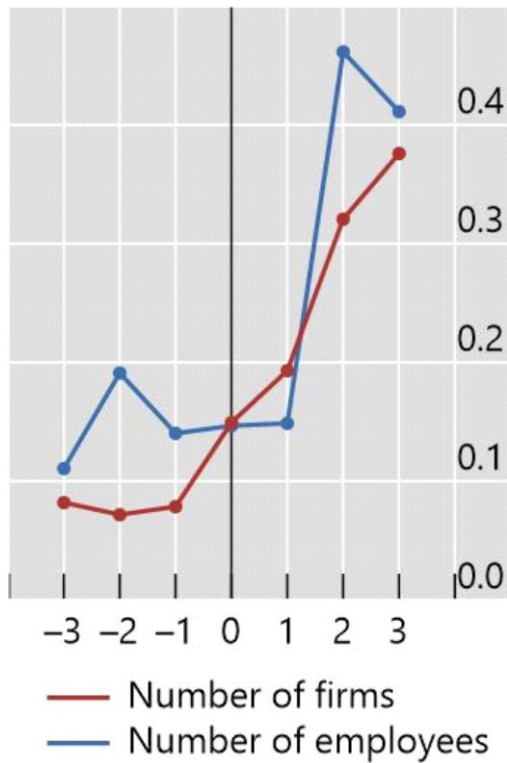


- Credit grew more strongly in economies with government credit guarantees
- But guarantees appear to have held back reallocation

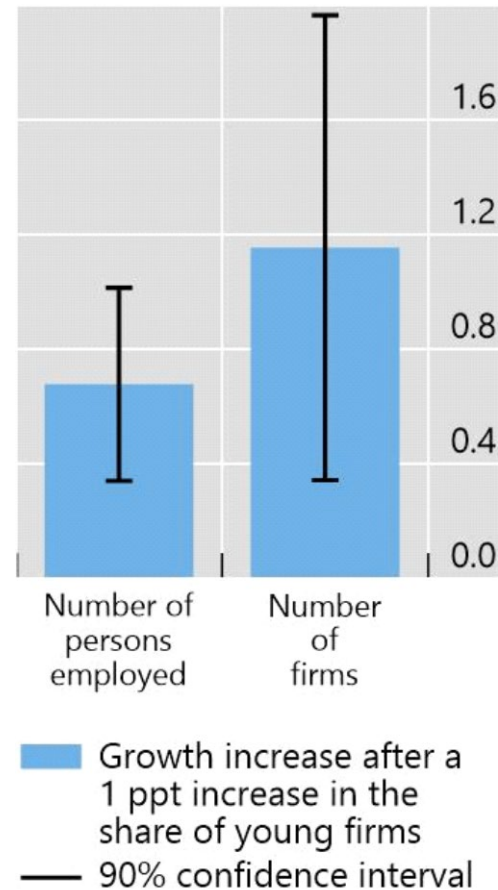
[Link to BIS AER 2021](#)

Comment # 3: New entrants boost growth particularly when demand is strong

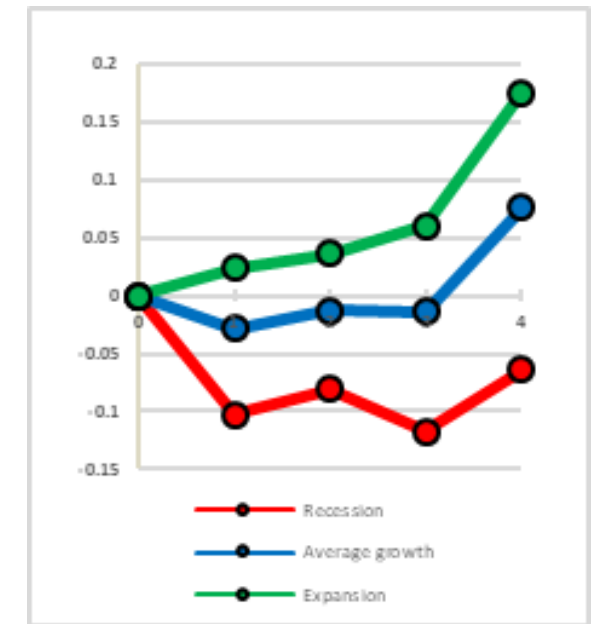
Exits boost entry – but with a lag



New entrants boost growth...



... more so when demand expectations are strong



Expansion

Average growth

Recession

Conclusions

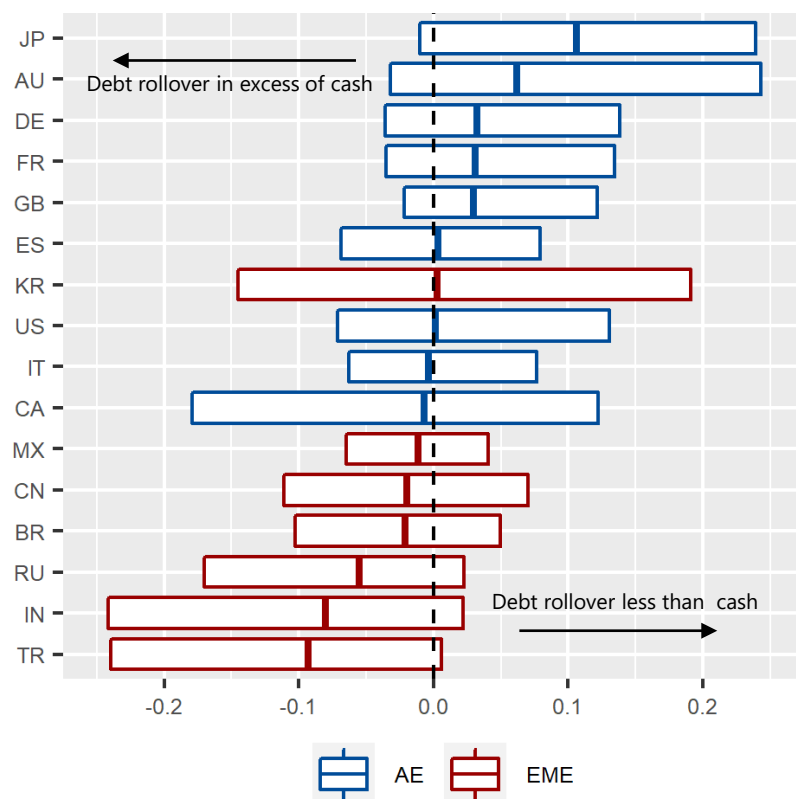
- Important series of papers
- Modelling framework -> helps think through the channels
- Would be nice to better understand sensitivity of conclusions to assumptions on the firm failure condition
- Business failures, postponed or cancelled? We need up-to-date data to understand this. Important analysis on this topic being done within central banks
- What else could threaten the global recovery?
 - Managing exits and encouraging entry
 - Addressing potential debt overhangs

Selected references to BIS publications on Covid-19 and the corporate sector

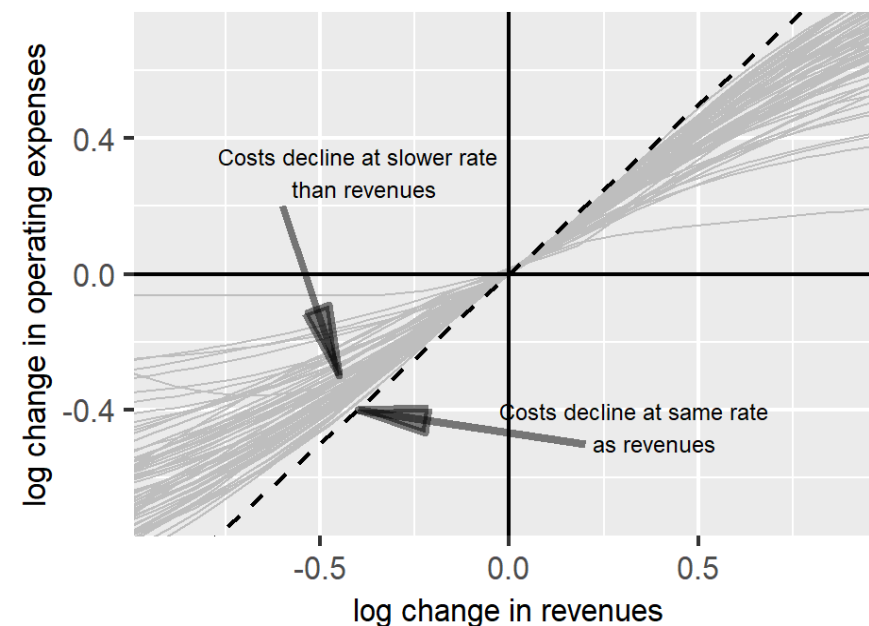
- **Covid-19 and corporate sector liquidity** by Ryan Banerjee , Anamaria Illes , Enisse Kharroubi and José María Serena Garralda, BIS Bulletin | No 10
- **The outlook for business bankruptcies** by Ryan Banerjee , Giulio Cornelli and Egon Zakrajšek, BIS Bulletin | No 30
- **Bankruptcies, unemployment and reallocation from Covid-19** by Ryan Banerjee , Enisse Kharroubi and Ulf Lewrick BIS Bulletin | No 31
- **The financial vulnerabilities driving firms to the exit** by Ryan Banerjee and Enisse Kharroubi, BIS Quarterly Review | December 2020
- **Liquidity to solvency: transition cancelled or postponed?** by Ryan Banerjee , Joseph Noss and Jose María Vidal Pastor BIS Bulletin | No 40
- **Sectoral reallocation, creative destruction and the business cycle** by Enisse Kharroubi, forthcoming
- **Covid and beyond, Chapter 1**, BIS Annual Economic Report 2021

Background: Covid-19 cash-flow shock

At least 25% of firms had debts coming due in excess of cash buffer in 2020, particularly in EMEs



Declining revenues would further compound the liquidity problem ...



... not least because operating expenses are downward sticky

[Link to Banerjee, Illes, Kharroubi and Serena \(2020\)](#)