

Zombies, Again? The COVID-19 Business Support Programs in Japan

ABFER Webinar “Capital Market Development: China and Asia”

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Outline

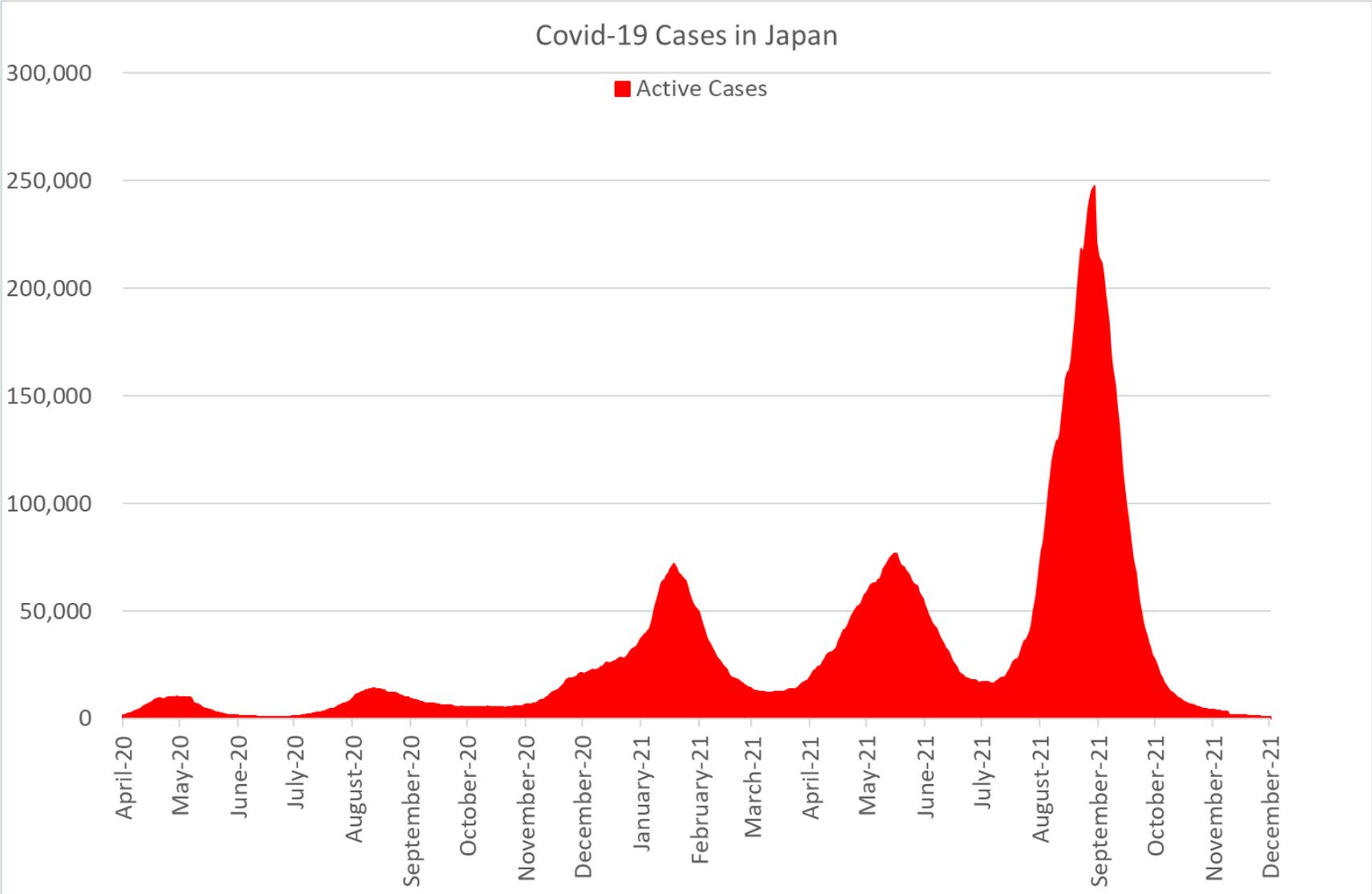
1. The health impact of the COVID-19 in Japan has not been as grave as in other advanced economies. The Japanese government imposed less restrictions on economic activities, too. Nonetheless, the Japanese economy suffered almost as much as the other countries.
2. Revealed (i) weakness of the Japanese economic growth that existed before the COVID-19 crisis, and (ii) problems of the traditional response to economic crises.
3. Traditionally Japanese government supported the troubled companies so that they can maintain the jobs. This has been the case again during the pandemic.
4. This traditional (and current) policy has two potential problems.
 - (i) Protects only workers that are under the lifetime employment system (this is already happening)
 - (ii) Can end up protecting zombie firms (this is likely to happen soon)

Health impacts of the Covid-19 pandemic

- Cumulative numbers per million population as of December 1, 2021.
- Source: <https://www.worldometers.info/coronavirus/#countries> and <https://ourworldindata.org/covid-vaccinations>

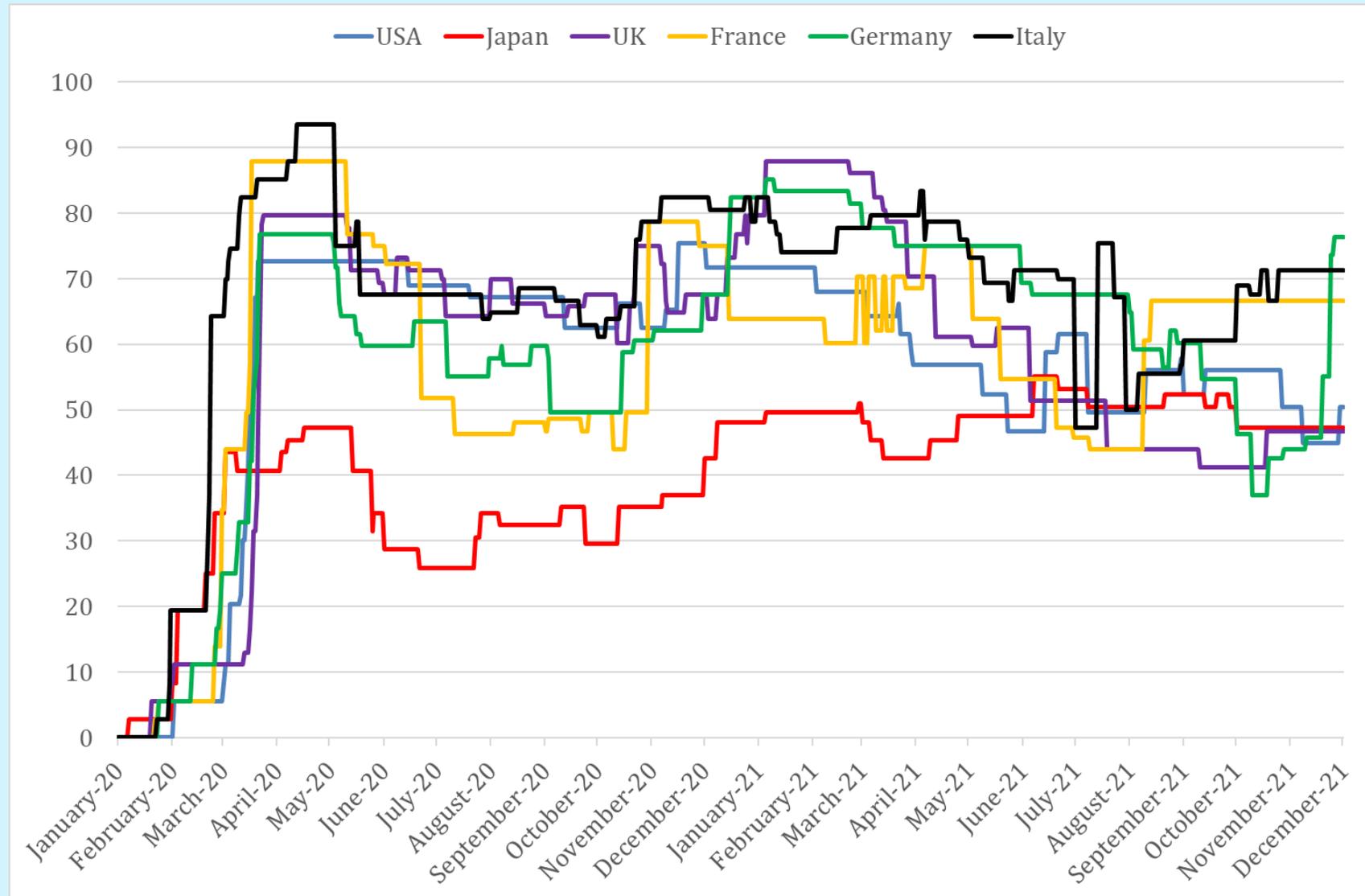
	Cases	Deaths	People fully vaccinated against COVID-19 (%)
Japan	13,717	146	77.31%
South Korea	8,915	72	80.03%
Singapore	44,975	123	91.91%
India	24,733	336	32.15%
USA	148,534	2,412	58.14%
UK	150,254	2,122	67.98%
Italy	83,592	2,220	72.99%
France	117,980	1,821	69.79%
Germany	70,375	1,218	67.97%

Active Covid-19 Cases



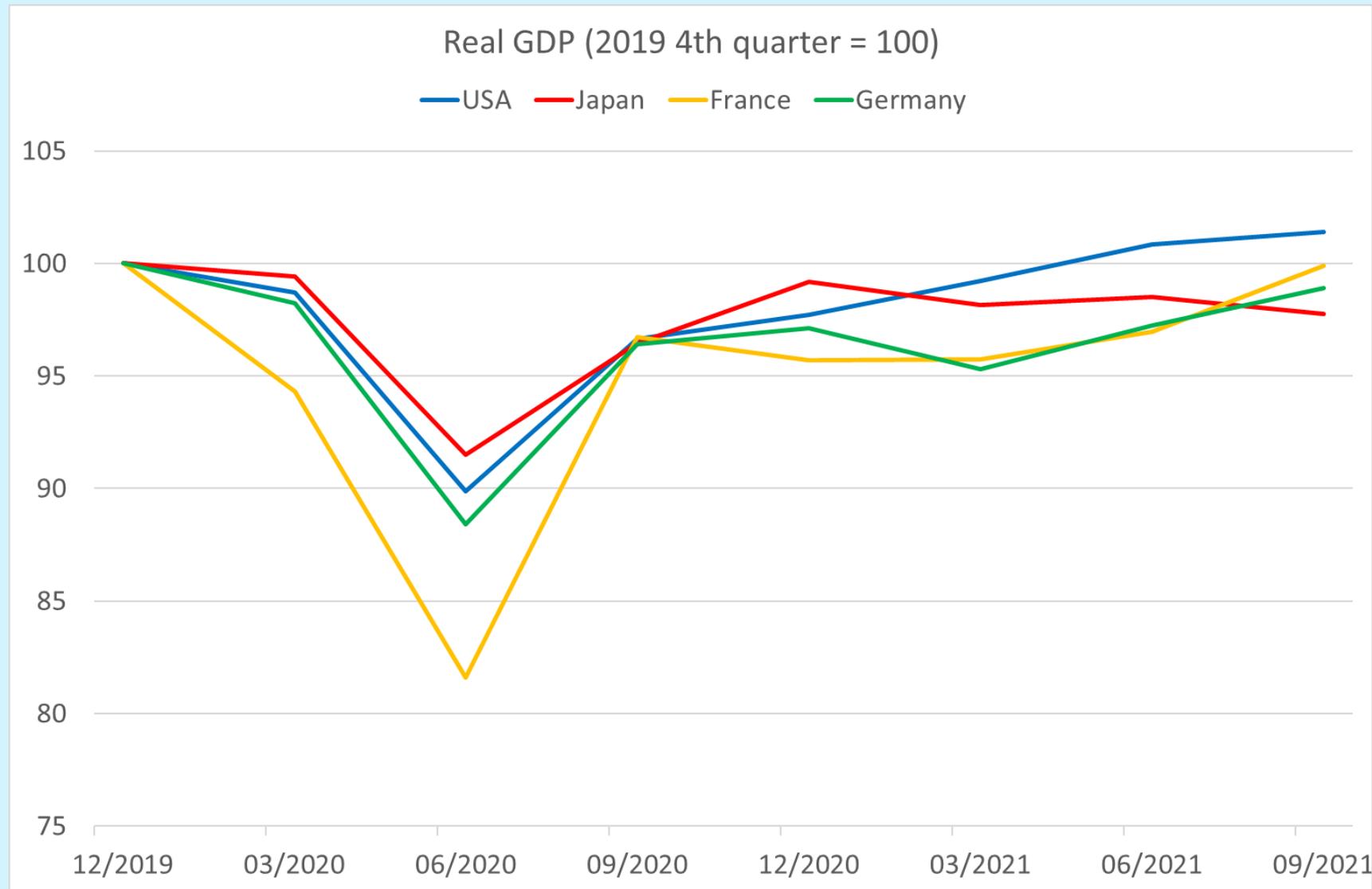
Source: CEIC Data

Government restriction has been less stringent



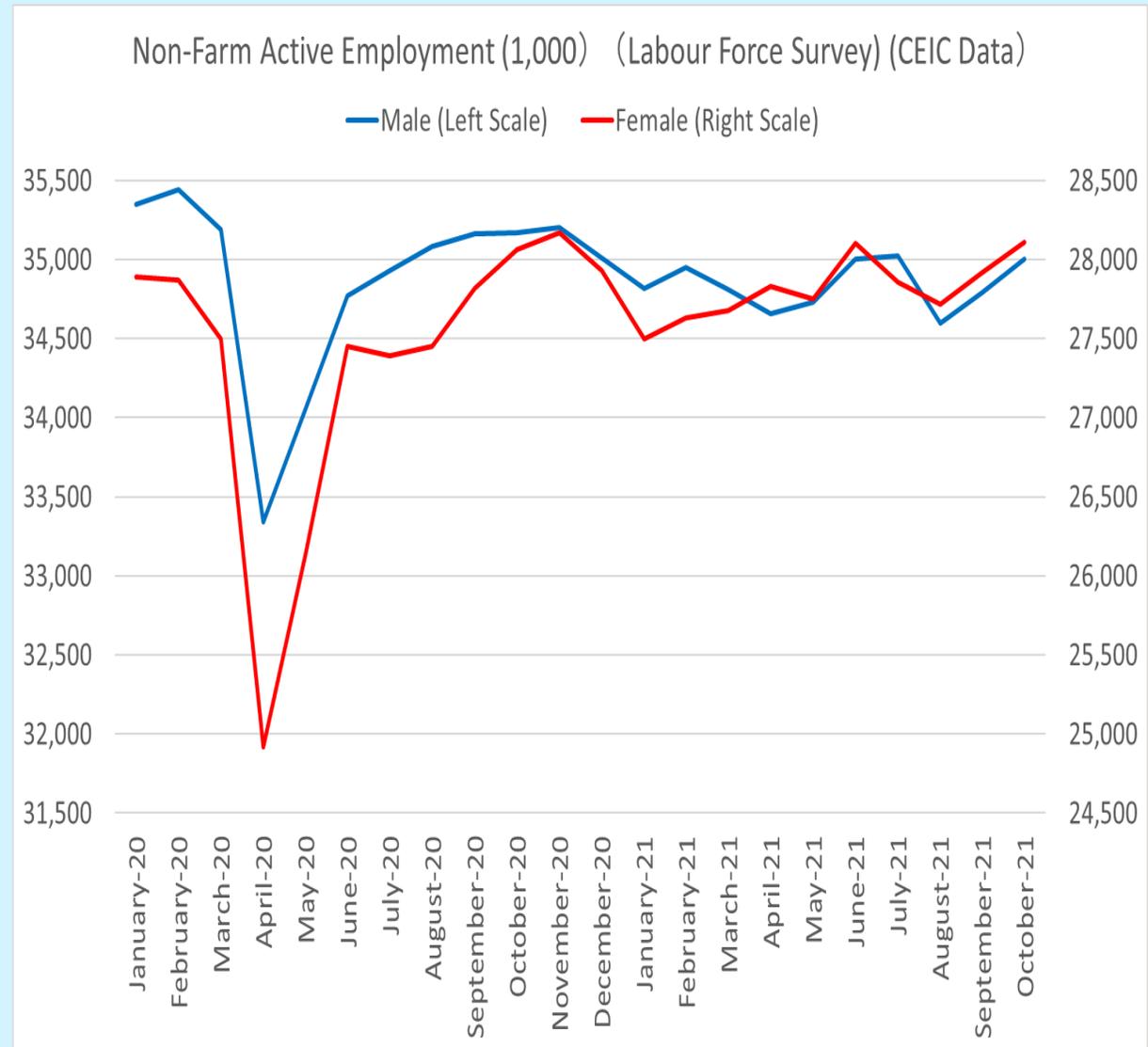
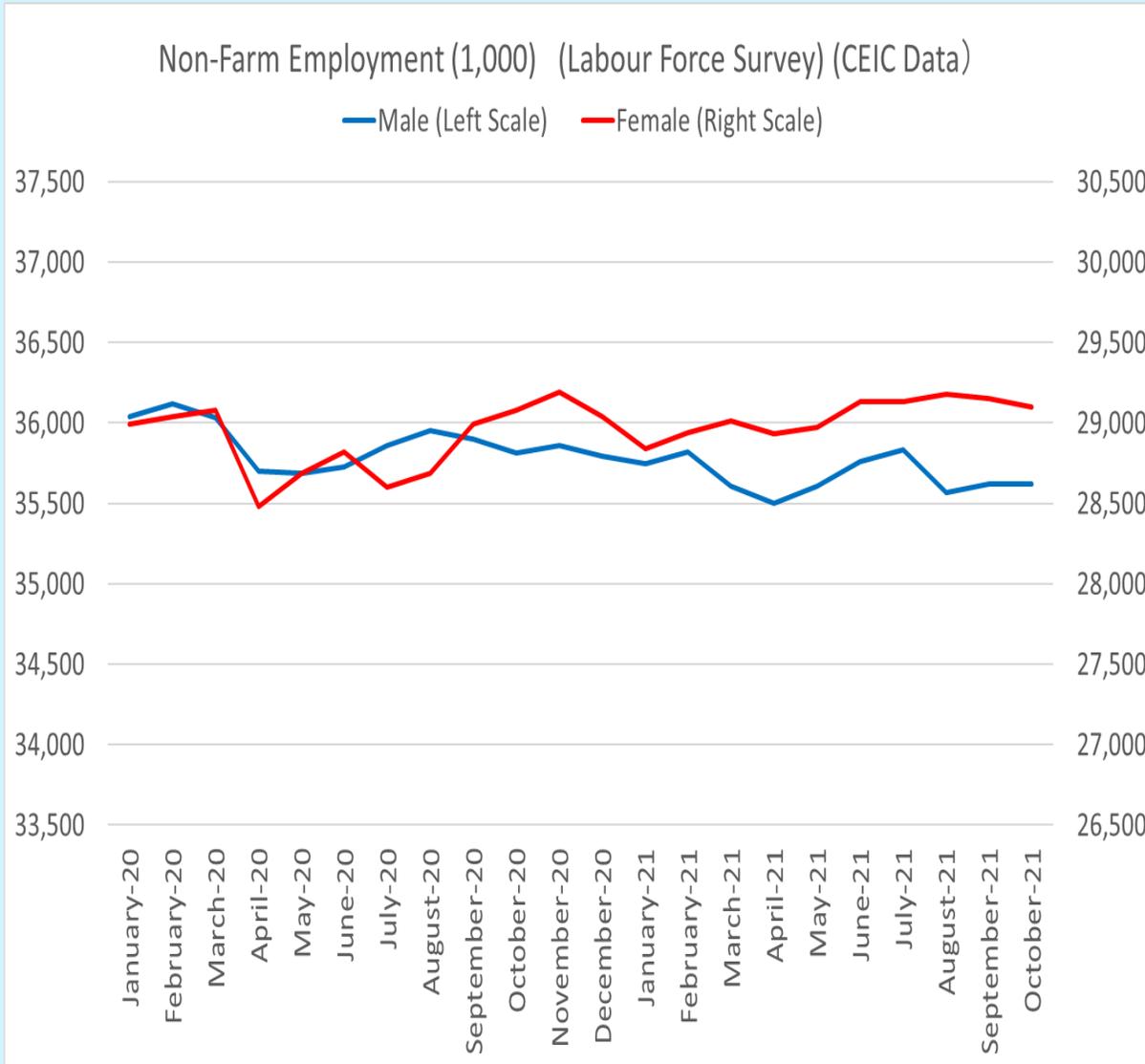
Source: CEIC Data

Economy suffered as much as other countries



Source: CEIC Data

But employment has been rather stable: Active Employment (= Employment – Furloughed)



Thanks to various government supports

- Many policy measures to protect corporations so that they can maintain employment
- For example,
 - Employment adjustment subsidy
 - Business continuity grant
 - Office rent grant
 - Concessional (zero-interest, zero-guarantee fee) loans from (1) Japan Finance Corporation, (2) Shoko Chukin Bank, and (3) private sector banks
- Some policies assisted workers/households directly, but the amount was smaller
- For example,
 - Special cash payment of ¥100,000 per person
 - Emergency loans for households

Three supplementary budgets in Fiscal 2020

- ¥45,013 billion considered as economic supports (as opposed to prevention of infection, etc.)
- ¥31,136 billion (69%) was to help corporations and ¥13,877 billion (31%) was to help workers/households
- ¥3,295 billion out of the Reserve Fund (予備費) considered as economic supports
- ¥1,808 billion (55%) was to help corporations and ¥1,487 billion (45%) was to help workers/households
- In addition, ¥1,622 billion from the unemployment insurance special account was used for Employment Adjustment Subsidies (雇用調整助成金)

Date	Total Size (¥ billion)
April 2020	25,691
May 2020	31,911
January 2021	19,176

Distinguishing assistances (mainly) to firms and individuals: Example

A part of the first supplementary budget of FY 2020 (April 2020)

				経済対策	企業支援	個人支援
雇用の維持と事業の継続			19,490.5			
雇用調整助成金の特例措置の拡大			69.0	1	1	
中小・小規模事業者等の資金繰り対策			3,831.6	1	1	
中小・小規模事業者等に対する新たな給付金			2,317.6	1	1	
全国すべての人々への新たな給付金			12,880.3	1		1
子育て世帯への臨時特別給付金			165.4	1		1
その他			226.6			

Supplementary budget in Fiscal 2021

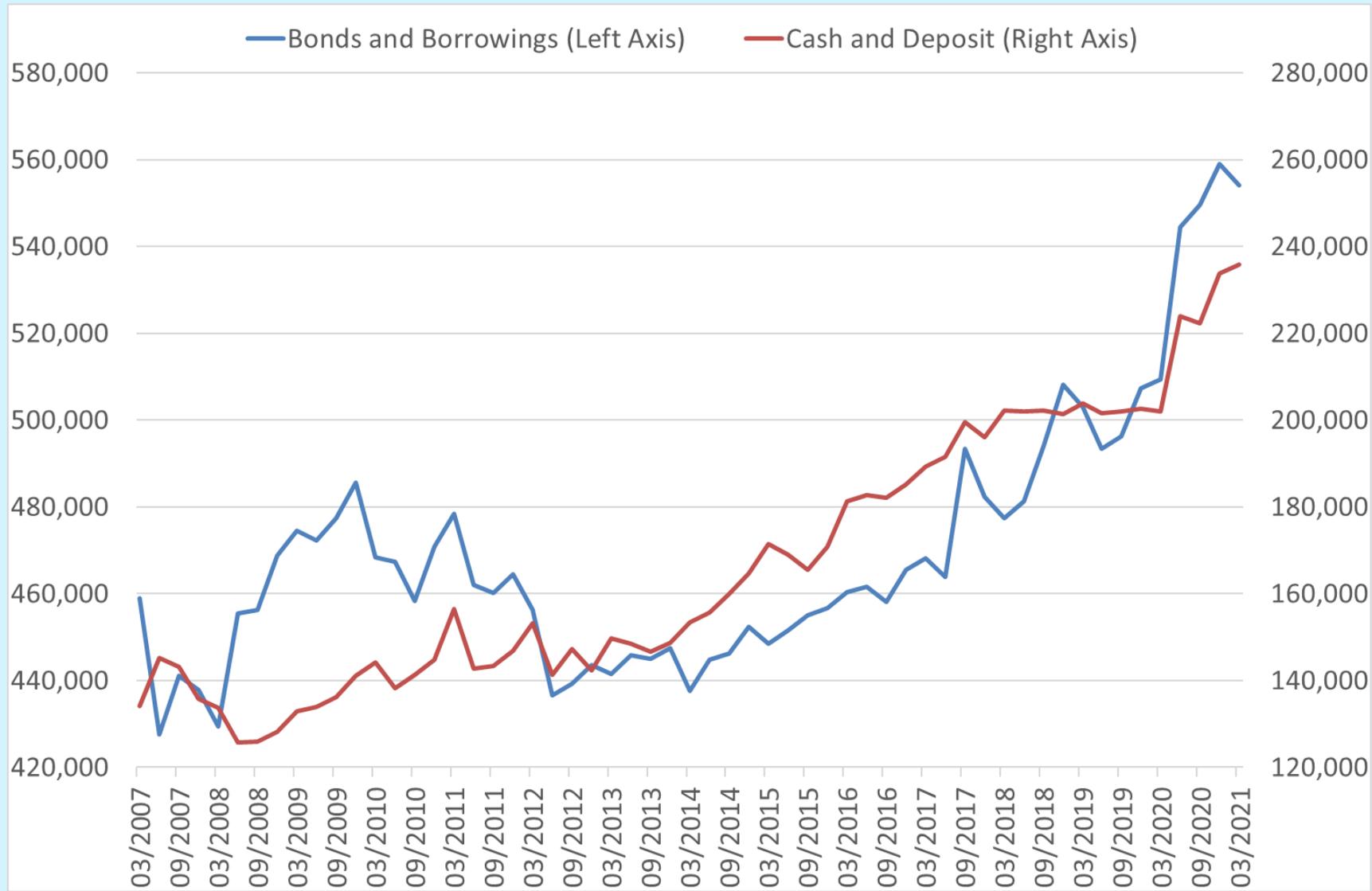
- Total size: ¥18,606 billion
- ¥14,128 billion considered as economic supports (as opposed to prevention of infection, etc.)
- ¥11,907 billion (84%) is to help corporations and ¥2,062 billion (15%) is to help workers/households

Results of government supports for corporations

- Bank loans increased
- Corporate deposits also increased

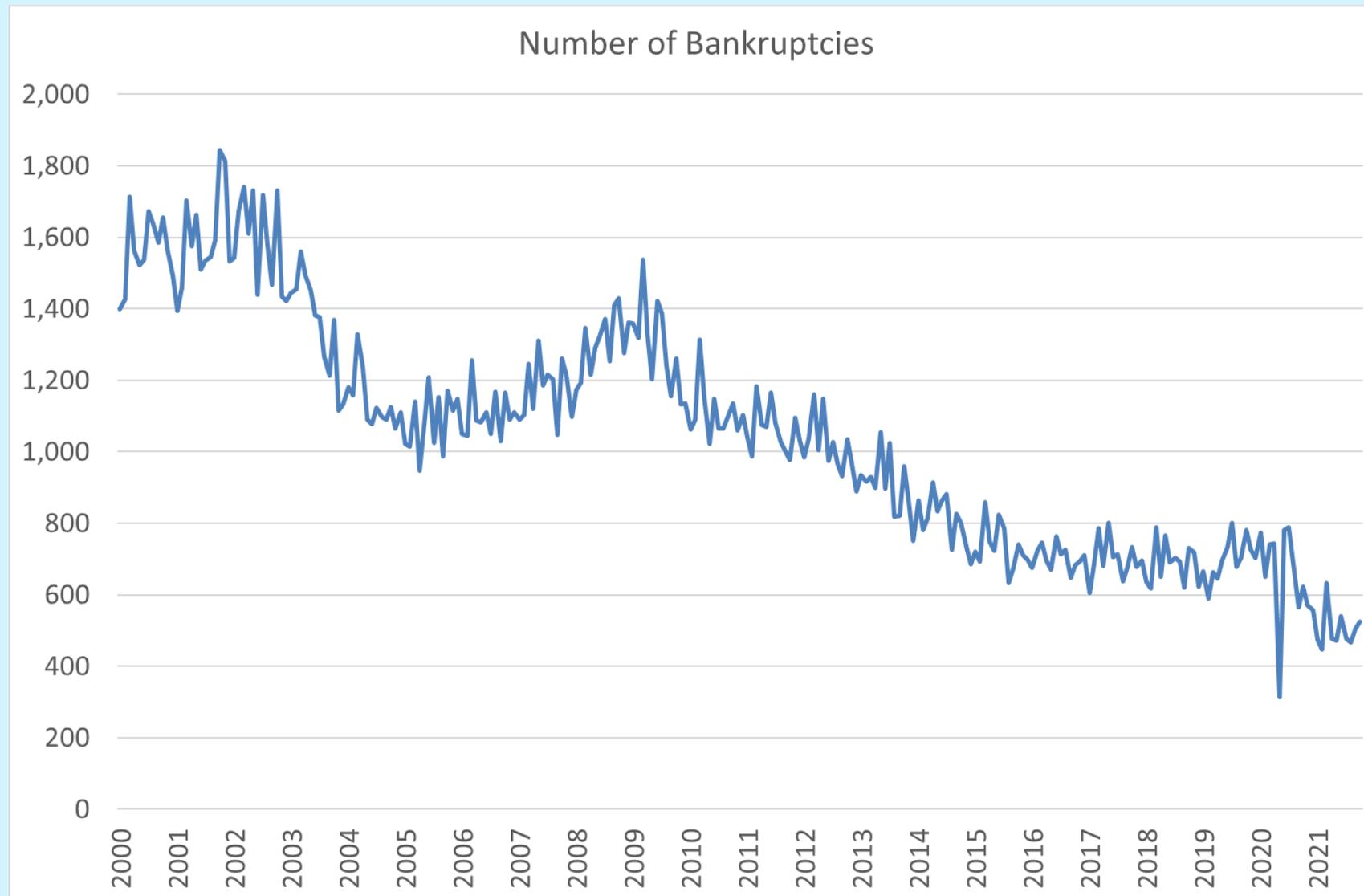
- Number of corporate failures was kept low
- Job losses were kept low and employment maintained overall (have seen this)

Bank Loans Increases (So Do Cash Holdings) (MOF Survey)



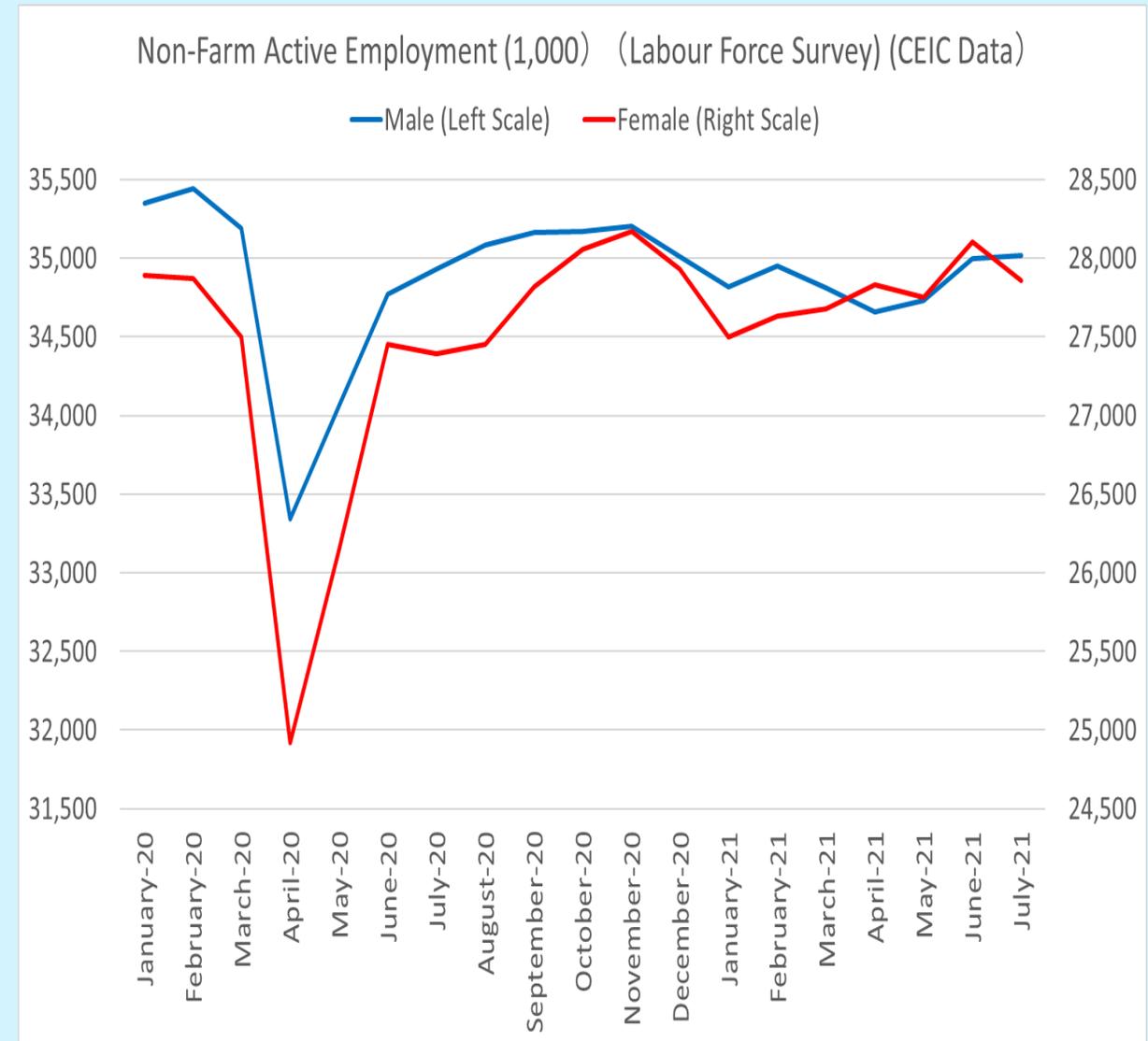
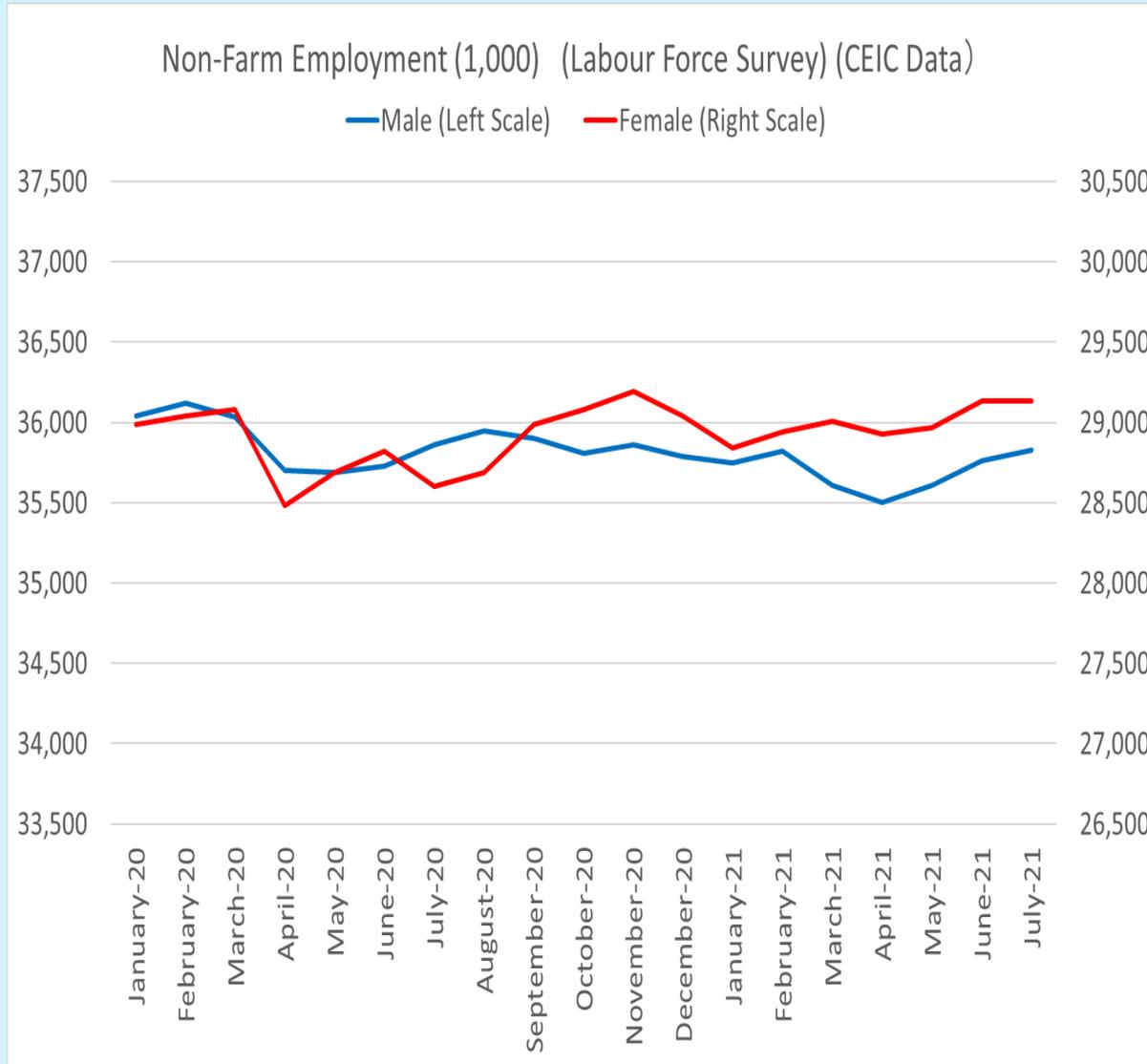
Source: CEIC Data

Number of bankruptcies declined (Tokyo Shoko Research)



Source: CEIC Data

Active Employment (= Employment – Furloughed)



Job losses are concentrated on ...

- Female (not in GFC) non-regular workers at small firms

	March 2009	Sept. 2020
Non-Farm employment	-0.45%	-0.34%
Male, Non-Farm employment	-0.68%	-0.20%
Female, Non-Farm employment	-0.12%	-0.50%
Regular (<i>seiki</i> in 2020, <i>joyo</i> in 2009)	-0.32%	0.61%
Non-regular (<i>rinji</i> in 2009)	-1.85%	-2.39%
Firm size 1-29 employees	-1.27%	-0.26%
Firm size 30-499 employees	-1.17%	-0.41%
Firm size 500 employees or more	1.07%	0.16%

- Percentage change in the employment from a year ago (author's calculation based on data from the *Labour Force Survey* (Ministry of Health, Labour and Welfare))

Two problems of Japan's responses

1. Protects only workers that are under the lifetime employment system (this is already happening)
2. Can end up protecting zombie firms (this may happen soon)

What kind of jobs were lost?

- Two papers by Kikuchi, Kitao, and Mikoshihba.
 1. Shinnosuke Kikuchi, Sagiri Kitao, Minamo Mikoshihba (2020a). “Heterogeneous Vulnerability to the COVID-19 Crisis and Implications for Inequality in Japan,” CREPE Discussion Paper No. 71.
 2. Shinnosuke Kikuchi, Sagiri Kitao, Minamo Mikoshihba (2020b). “Who Suffers from the COVID-19 Shocks? Labor Market Heterogeneity and Welfare Consequences in Japan,” CREPE Discussion Paper No. 80.
- First one is an ex ante analysis, the second one is an ex post analysis

Kikuchi, Kitao, and Mikoshiba (2020a)

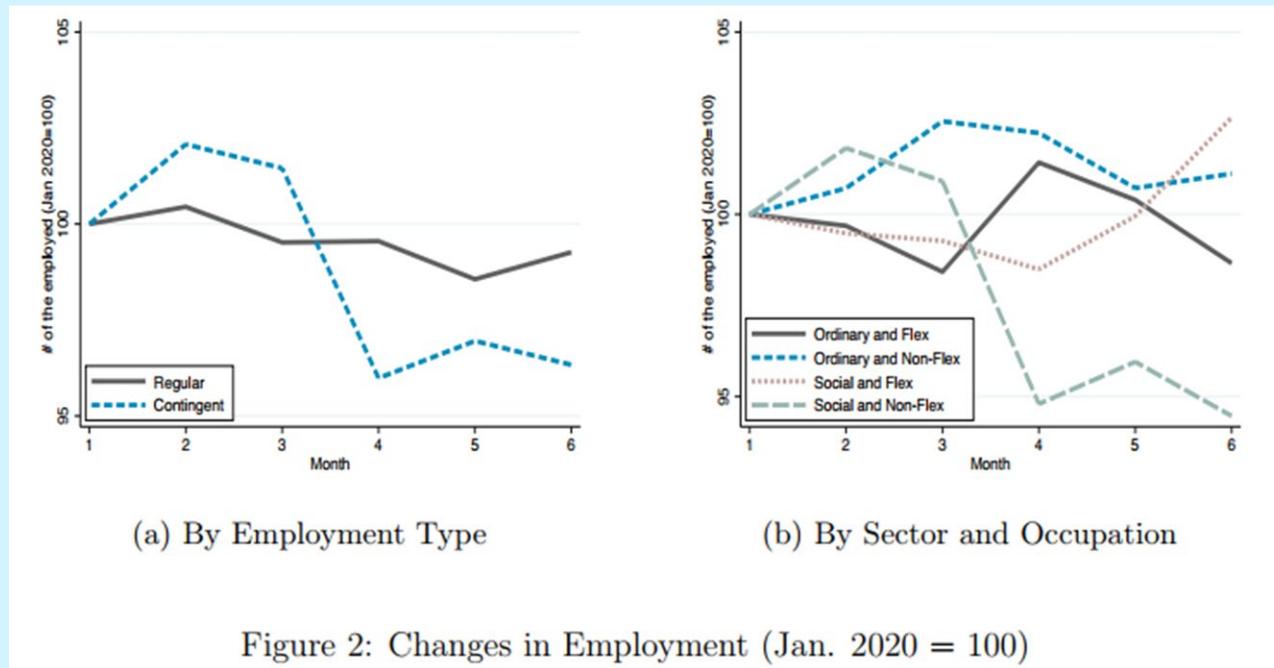
- Covid-19 shock impacts **non-regular** workers with **non-flexible** (difficult to remote work) jobs in **social** (requires face-to-face interactions and/or regular commute) industries, whose earnings are very low to start with.

Employment share (%) and average earnings (1,000 yen) by employment type (Table 4 of the paper)

Regular workers			Non-regular workers		
	Ordinary	Social		Ordinary	Social
Flexible	26.0% 5,535	24.0% 5,136	Flexible	12.9% 1,694	23.0% 1,697
Non-flex	32.8% 4,534	17.2% 3,981	Non-flex	20.2% 1,624	43.9% 1,338

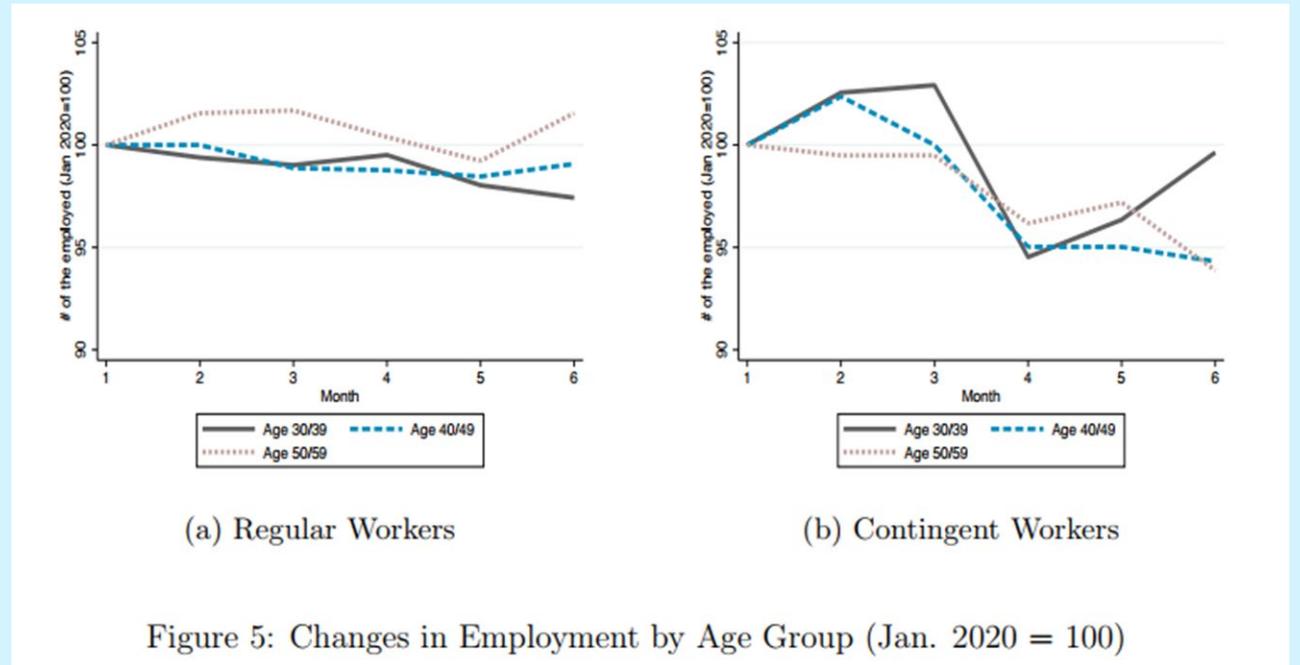
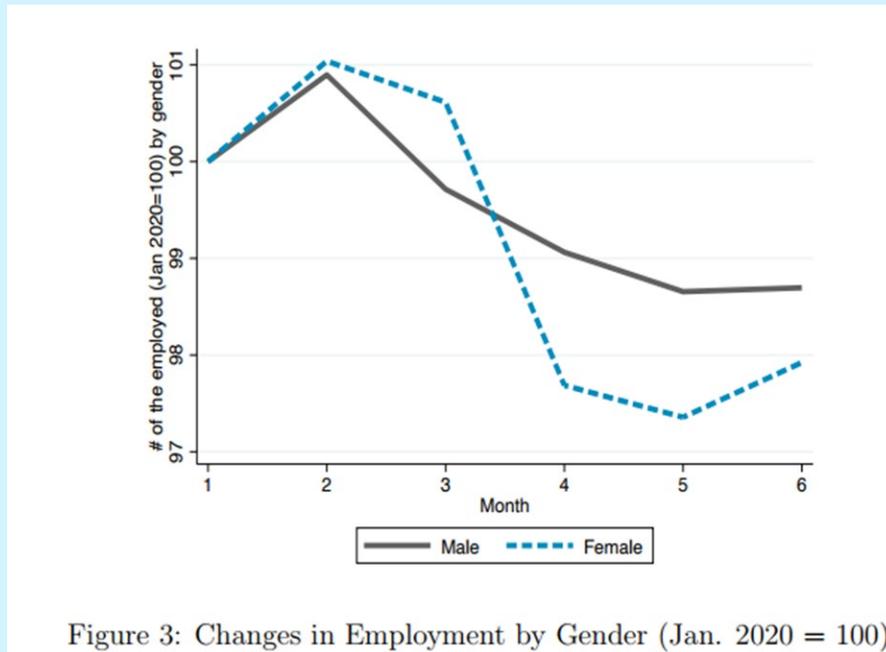
Kikuchi, Kitao, and Mikoshiba (2020b)

- Covid-19 shock indeed hits **non-regular** workers with **non-flexible** jobs in **social** industries.
- Contingent workers (non-regular workers) than regular workers
- Non-flexible jobs in social industries than flexible jobs in ordinary industries



Kikuchi, Kitao, and Mikoshiba (2020b)

- Female than male
- Young than old



Hidden Unemployment

Shinichiro Umeya and Kana Takeda (2021). 『なぜ「実質的失業者」に支援の手が届かないのか (Why the Help does not Reach the “Effectively Unemployed”)』, **Nomura Research Institute.**

武田佳奈「パート実質失業、女性で100万人超え:コロナ禍対応力付ける対策を」『日経ビジネス』2021年4月5日号、78－79ページ。

- Survey of 64,943 part-time workers (57,131 women and 7,812 men) in February 2021.
- 13.1% of the female respondents say their working hours declined by more than 50%
- Of which, 69.3% fail to receive compensation for furlough
- $13.1\% \times 69.3\% = 9.1\%$. When applied to the population (11.35 million part-time workers), 1.031 million women are “effectively unemployed.”
- Similarly 0.434 million men are effectively unemployed.

Zombie problem in Japan in the 1990s

- **Zombie Firm:** a firm that is unprofitable and would cease to exist without help from creditors and/or the government
- Initially identified for Japan in the late 1990s, when under-capitalized banks hesitated to recognize losses and instead rolled over loans to weak firms
- Ricardo Caballero, Takeo Hoshi, and Anil Kashyap (2008). “Zombie Lending and Depressed Restructuring in Japan,” *American Economic Review*, 98, 1943–77.
- Zombie firms have been found to discourage growth of productive firms for Japan

Now has spread to many advanced countries

- Recently, many papers find similar problem of zombies in Europe
 - Müge Adalet McGowan, Dan Andrews and Valentine Millot (2017), “The Walking Dead?: Zombie Firms and Productivity Performance in OECD Countries”, *OECD Economics Department Working Papers*, No. 1372.
 - Viral V. Acharya, Matteo Crosignani, Tim Eisert, and Christian Eufinger (2020). “Zombie Credit and (Dis-)Inflation: Evidence from Europe,” *NBER Working Paper* No. 27158.

Policies to protect corporations can create zombies

- During the COVID-19, the government protected corporations again (though some direct assistances to individuals were also tried)
- Avoiding too many bankruptcies may be the right response during the crisis, but can impede the adjustment to “New Normal”
- Suggestive evidence that Japan’s government support programs may indeed create zombies: Takeo Hoshi, Daiji Kawaguchi, and Kenichi Ueda (2021). “Zombies, Again? The COVID-19 Business Support Programs in Japan”
- Looks at the Survey conducted jointly by Tokyo Shoko Research (TSR) and the University of Tokyo: Find that the companies with lower credit scores were more likely to receive the government supports

Survey on the Impacts of COVID-19 on Corporations

- By Tokyo Shoko Research (TSR) and Center for Research and Education in Program Evaluation (CREPE) at University of Tokyo
- October 26 – November 6, 2020
- Web Survey for TSR mail magazine subscribers (158,264 firms): Got responses from 5,695 firms, of which 4,093 has matching corporate data in the TSR database at the end of 2019
- Questions on
 - Introduction of work-from-home before and during the pandemic
 - Changes in monthly sales, employment, working hours from a year ago (for each month between February and September, 2020)
 - Application for and receipt of government grants, subsidies, and concessional loans

Application for and Receipts of Subsidies, Grants, and Concessional Loans

	Applied	Received
Special Terms of Employment Adjustment Subsidy	0.259	0.219
Business Continuity Grant	0.246	0.216
Office Rent Grant	0.102	0.067
Concessional Loan by Japan Financial Cooperation	0.158	0.142
Concessional Loan by Shoko Chukin Bank	0.056	0.046
Concessional by Private Sector Banks	0.254	0.231

TSR Credit Score

Manager's quality [20 points]	Growth [25 points]	Stability [45 points]	Reputation and Transparency [10 points]	Total [100 points]	Credit worthiness judgement
Management philosophy Experience	Sales growth Profit growth Market prospect	Type of business Balance sheet strength Lending relation Supplier-Customer relation Collateralizable assets	Disclosure General reputation		80 or above: No risk 65 to 79: Safe 50 to 64: Attention 30-49: Somewhat caution 29 or below: Caution

Source: TSR website (https://www.tsr-net.co.jp/guide/knowledge/glossary/ha_05.html)

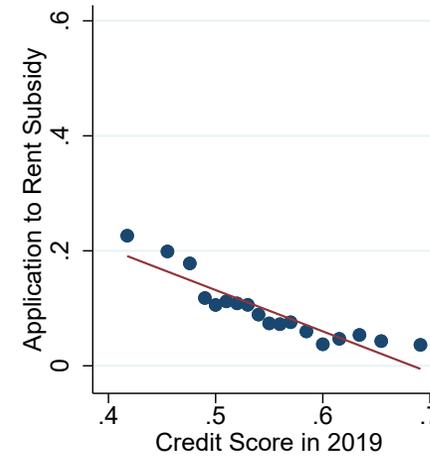
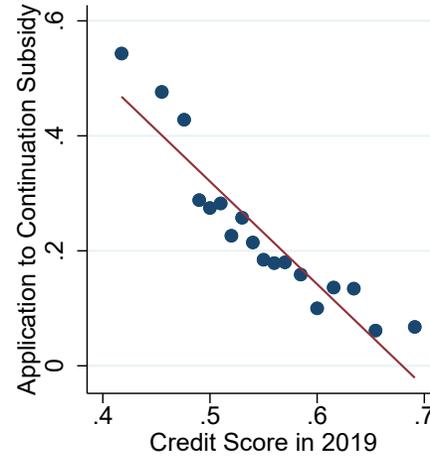
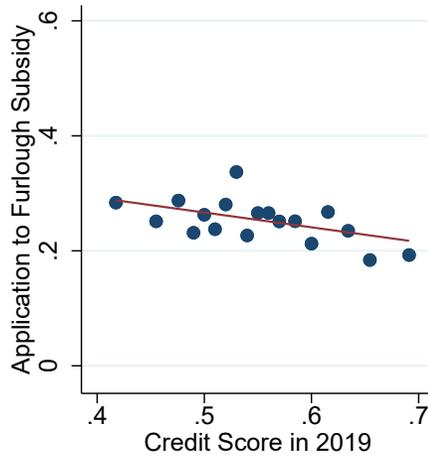
Credit Score and Application/Receipt of Subsidies and Grants

Employment
Adjustment Subsidy

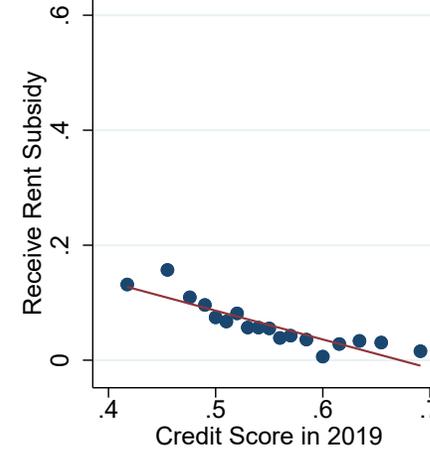
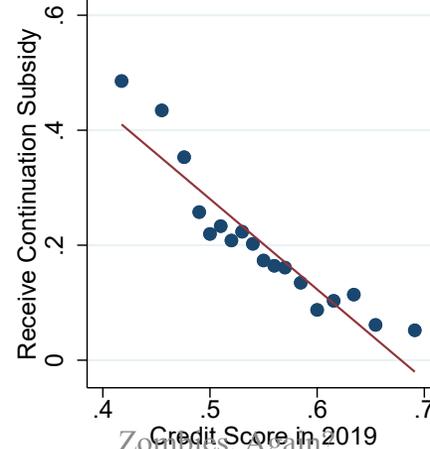
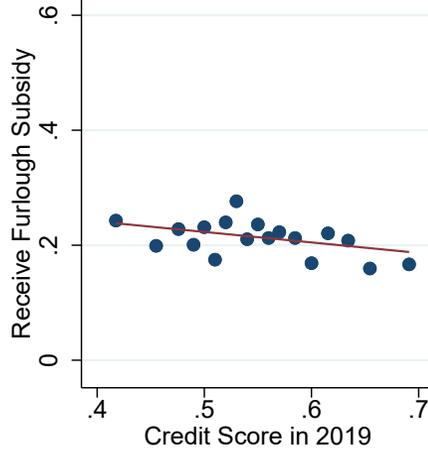
Continuation Grant

Rent Subsidy

Application



Receipt



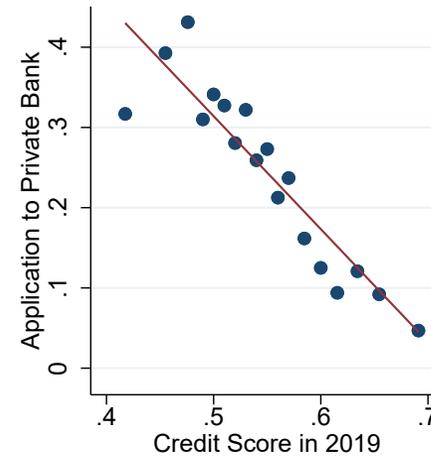
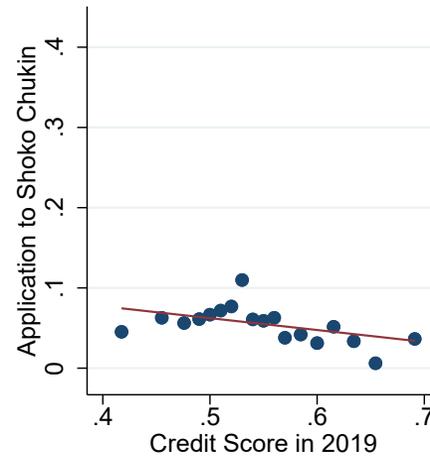
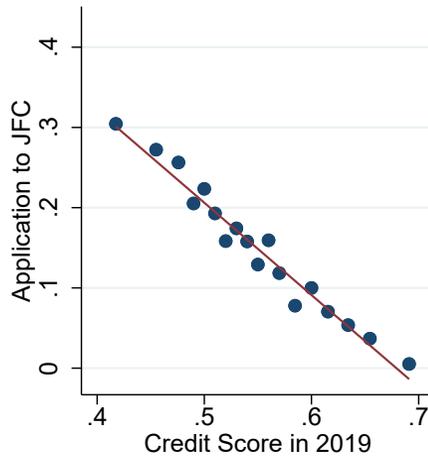
Credit Score and Application/Receipt of Concessional Loans

Japan Finance Corp.

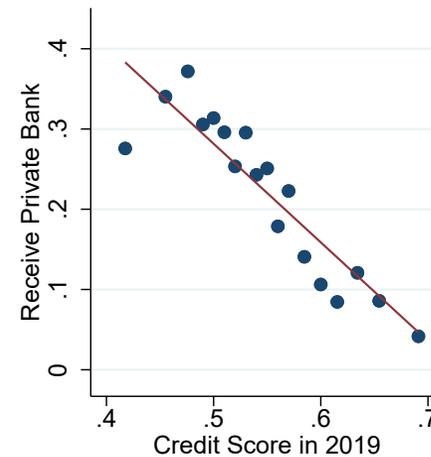
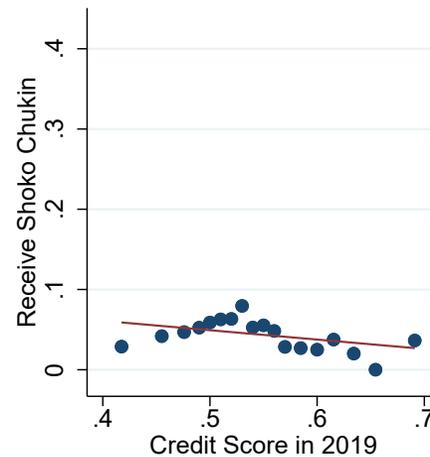
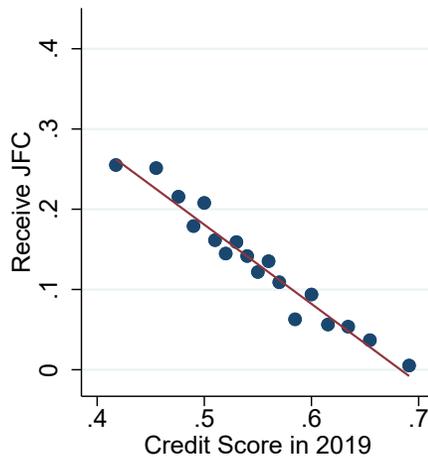
Shoko Chukin Bank

Private Sector Banks

Application



Receipt



Regression Analysis

- Result does not change when we estimate regression models, controlling for the size of COVID-19 shock (measured by the sales decline from 12 months ago), sales prospect of 2021, firm size, industry, and region.
- Firms with low credit scores in 2019 were more likely to be assisted by the government support programs.
- Results are robust when (1) we use profit rate as the proxy for pre-pandemic firm performance instead of credit scores, (2) we examine only the firms that were eligible to apply, and (3) we restrict the sample to SMEs.

Example: Application for Employment Adjustment Subsidy

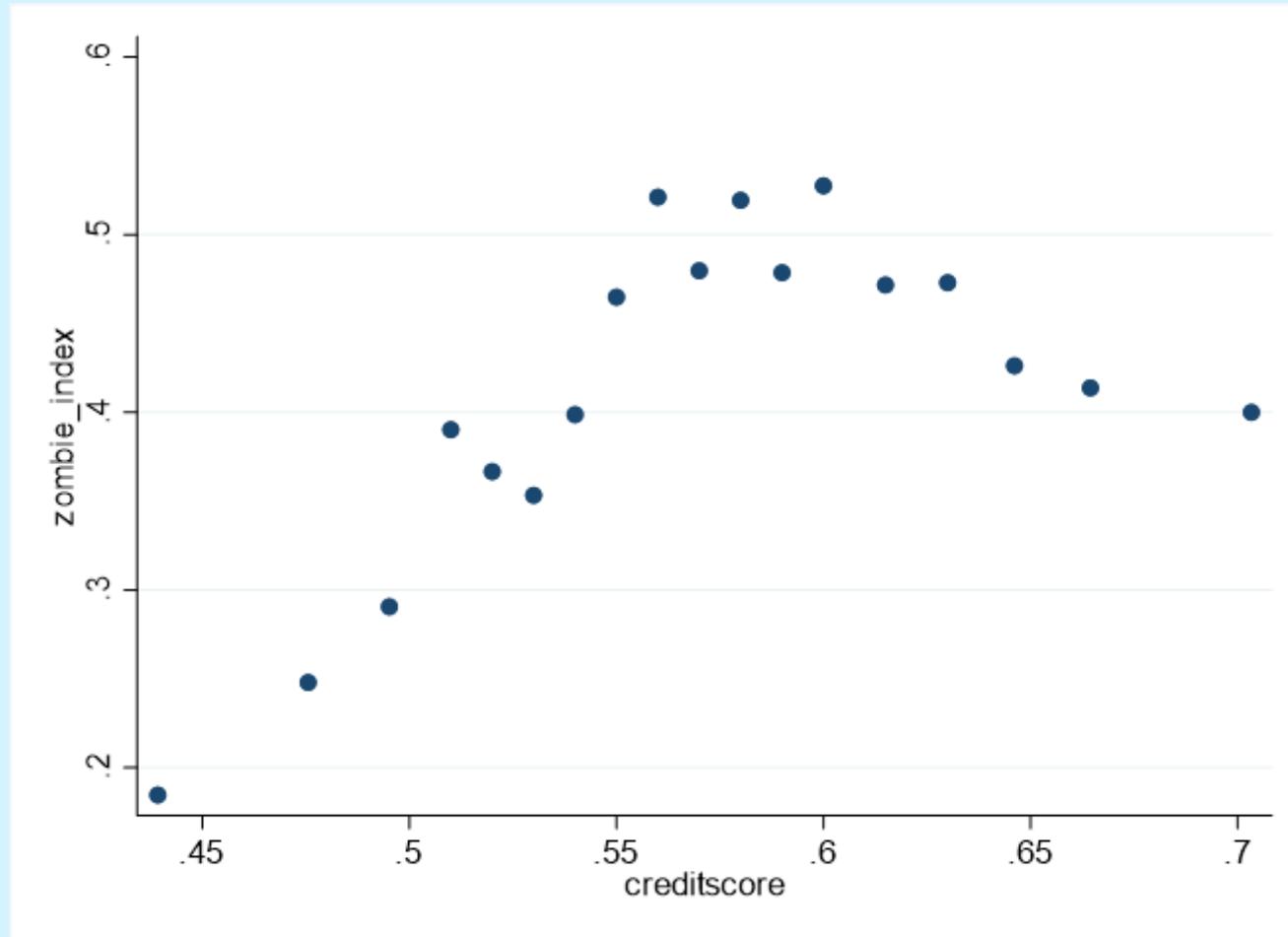
	(1)	(2)	(3)	(4)	(5)	(6)
Credit Score	-0.288*** (0.101)	-0.522*** (0.126)	-0.417*** (0.124)	-0.476*** (0.128)	-0.289** (0.130)	-0.279** (0.133)
Ln (Sales of 2019)		-0.012* (0.007)	-0.013* (0.007)	-0.013* (0.007)	-0.017** (0.009)	-0.023** (0.009)
Ln (Employment of 2019)		0.062*** (0.008)	0.065*** (0.008)	0.064*** (0.008)	0.053*** (0.010)	0.057*** (0.010)
Sales Prospect of 2021 Relative to 2019		-0.152*** (0.034)	-0.147*** (0.034)	-0.150*** (0.034)	-0.120*** (0.033)	-0.099*** (0.034)
Min (YoY Sales Growth, Feb-Sep 2020)		-0.282*** (0.025)				
<i>N</i>	4,201	4,201	4,201	4,201	4,199	4,151
Bin Dummy Variables of Min (Sales)	No	No	Yes	Yes	Yes	Yes
Prefecture	No	No	No	Yes	Yes	Yes
2-Digit Ind	No	No	No	No	Yes	No
3-Digit Ind	No	No	No	No	No	Yes

Regression Results (Coefficient Estimate on TSR Credit Score in 2019)

Program	Employment Adj. Subsidy	Business Cont. Grant	Office Rent Grant	JFC Loan Concessional	ShokoChukin Concessional	Bank Zero-Zero Loan
Applied	-0.289 ** (0.130)	-0.346 *** (0.108)	-0.174 * (0.090)	-0.803 *** (0.113)	-0.419 *** (0.073)	-0.961 *** (0.132)
Received	-0.174 (0.125)	-0.247 ** (0.108)	-0.071 (0.076)	-0.583 *** (0.108)	-0.339 *** (0.066)	-0.758 *** (0.129)

Source: Takeo Hoshi, Daiji Kawaguchi, and Kenichi Ueda (2021). “Zombies, Again? The COVID-19 Business Support Programs in Japan.” Table 3. N=4199. OLS estimates and heteroskedasticity-consistent standard errors. All specifications include bin dummy variables with 0.1 interval between -1 and 1 of minimum of sales growth between February and September 2020, natural logarithm of sales in 2019, natural logarithm of the number of employees in 2019, sale growth prospect of 2021 relative to 2019, prefecture fixed effects, 2-digit industry fixed effects.

Firms with low credit scores are not necessarily zombies



- Proportion of zombies for each credit scores
- Many firms with low credit scores were not (identified as) zombies in the sense that they were not subsidized
- They are now subsidized and may become zombies

Sampling bias



Source: Takeo Hoshi, Daiji Kawaguchi, and Kenichi Ueda (2021). “Zombies, Again? The COVID-19 Business Support Programs in Japan.” Appendix Figure B1.

Note: The original credit score is divided by 100 in order to calculate the credit score above.

Summary

1. The health impact of the COVID-19 in Japan has not been as grave as in other advanced economies. The Japanese government imposed less restrictions on economic activities, too. Nonetheless, the Japanese economy suffered almost as much as the other countries.
2. Revealed (i) weakness of the Japanese economic growth that existed before the COVID-19 crisis, and (ii) problems of the traditional response to economic crises.
3. Traditionally Japanese government supported the troubled companies so that they can maintain the jobs. This has been the case again during the pandemic.
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