



# Debt sustainability during a pandemic

*Luuk Oudshoorn*



## Supporting the economy

*In March, the government announced up to 90B financial support.*

*Costs of COVID so far: 45-144B*

1. Kolen (2020) ESB 4791 504-509
2. Frijters (2020) ESB 4791 510-513

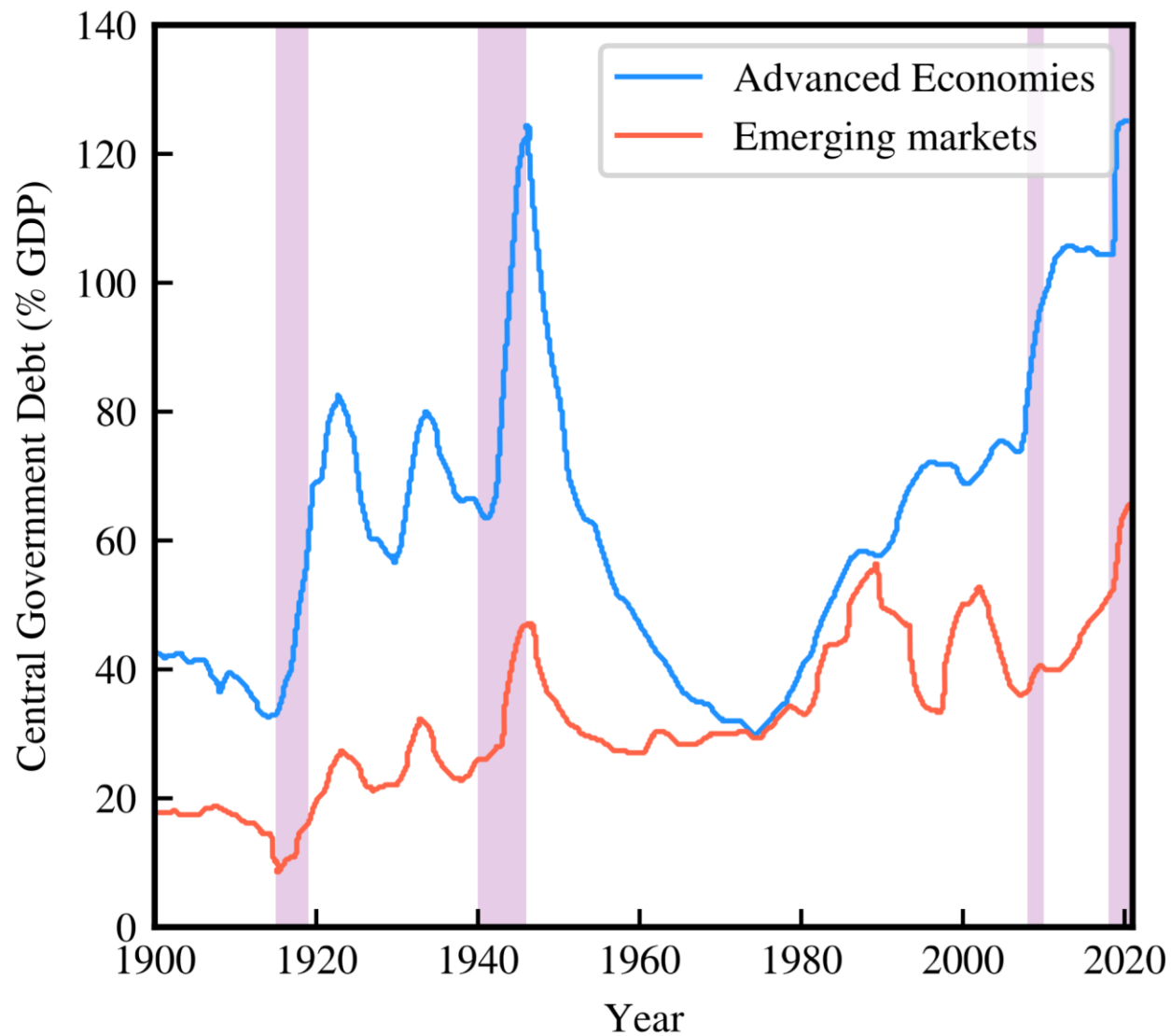


## Fiscal stimulus

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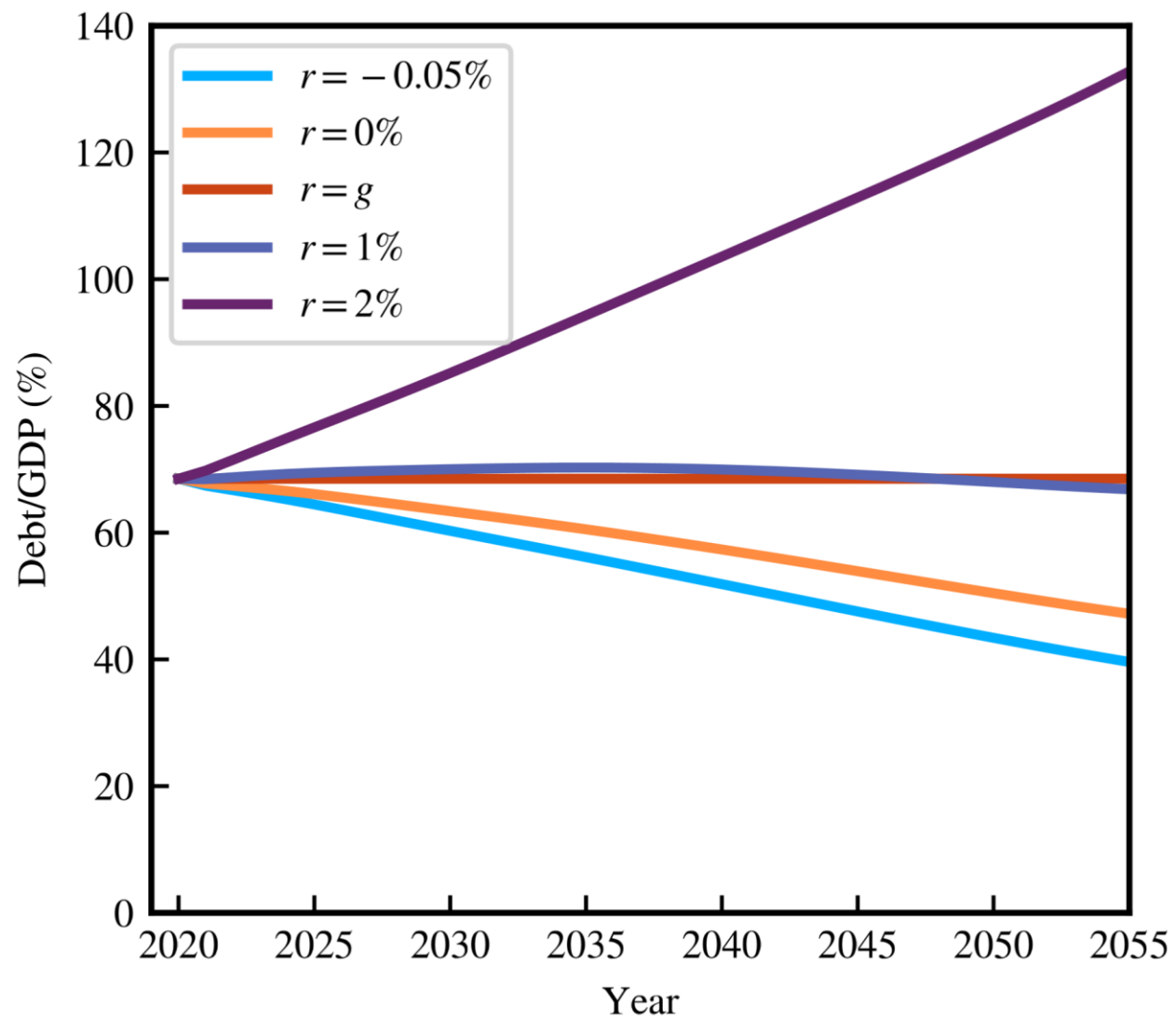
- ✓ Job retention schemes
- ✓ Liquidity support
- ✓ Cash transfers to businesses
- ✓ Looking ahead

- FISCAL MONITOR: Policies for the Recovery (IMF, 2020)
- The risk of 9 million zombie jobs in Europe (Utermöhl, Ozyurt, and Subran 2020)
- Hagen-Zanker J., Bastagli F., Harman L., Barca V., Sturge G., Schmidt T., 2016, ODI Briefing. London: Overseas Development Institute
- Brunnermeier M., Krishnamurthy A., 2020
- Wilson D. J., 2012, American Economic Journal: Economic Policy, 4, 251



## Financing these expenses

- ✓ Lower taxes revenue and higher costs
- ✓ Government deficit
- ✓ Debt issuance



## Stability and sustainability

- ✓ Since 1980s ever increasing debt
- ✓ Worries about sustainability
- ✓ Trade-off



## Historical evidence

*Can we look at historical fiscal and monetary parameters to create future expectations?*

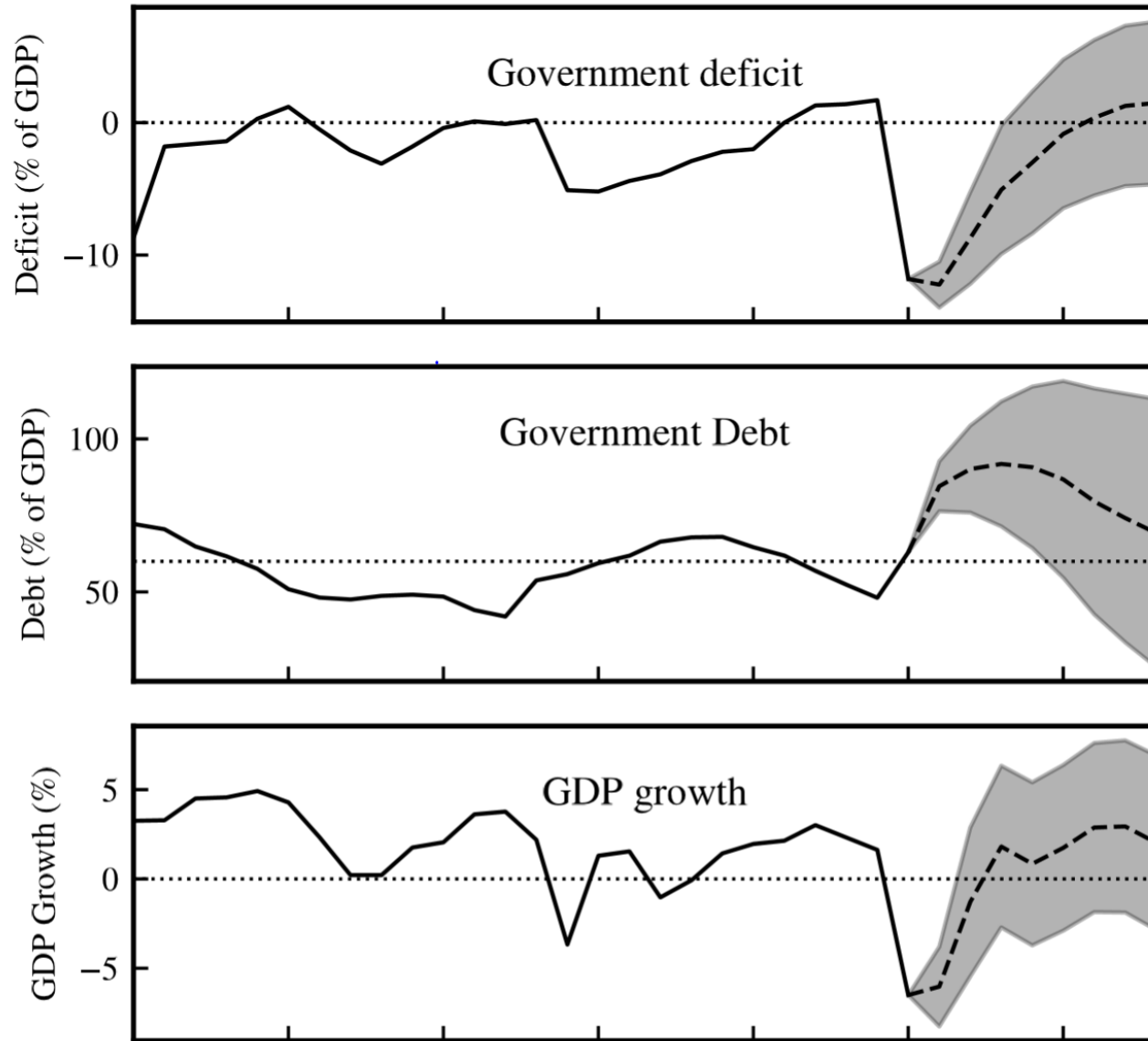
$$\mathbf{x}_t = c + \theta_1 \mathbf{x}_{t-1} + \theta_2 \mathbf{x}_{t-2} + \theta_3 \mathbf{x}_{t-3}$$

$$\mathbf{x}_t = (d_t, g_t, D_t, \pi_t).$$

$$\begin{cases} d_t = \underset{(0.24)}{0.84} d_{t-1} - \underset{(0.3)}{0.64} d_{t-2} - \underset{(0.07)}{0.3} D_{t-1} - \underset{(0.22)}{0.48} g_{t-1} - \underset{(0.33)}{0.57} \pi_{t-1} \\ D_t = -\underset{(1.16)}{2.05} d_{t-1} + \underset{(0.32)}{1.3} d_{t-1} D_{t-1} \\ g_t = \underset{(0.13)}{1.2} g_{t-1} + \underset{(0.35)}{0.82} r_{t-1} - \underset{(0.58)}{1.6} r_{t-2} + \underset{(0.05)}{0.1} D_{t-4} \\ \pi_t = \underset{(0.12)}{0.9} \pi_{t-1} - \underset{(0.13)}{0.27} \pi_{t-4} \\ r_t = \underset{(0.13)}{1.35} r_{t-1} - \underset{(0.21)}{0.54} r_{t-2} - \underset{(0.019)}{0.038} D_{t-1} + \underset{(0.027)}{0.057} D_{t-2} \end{cases}$$

## Dynamic behaviour

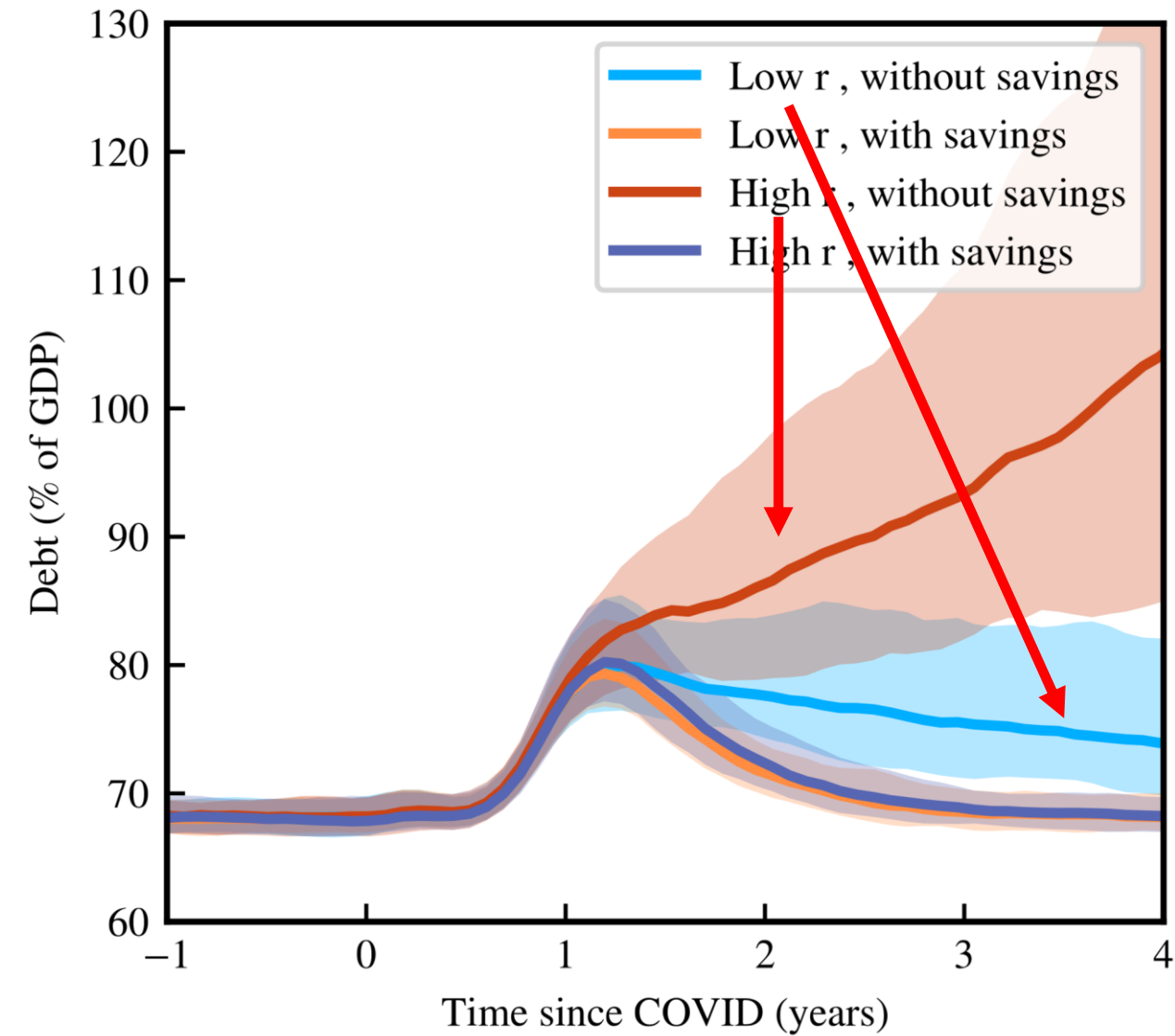
-  Government deficits
-  Debt
-  GDP growth
-  Interest rate + inflation



# Dynamic behaviour

- ✓ Government deficits
- ✓ Debt
- ✓ GDP growth
- ✓ Interest rate + inflation





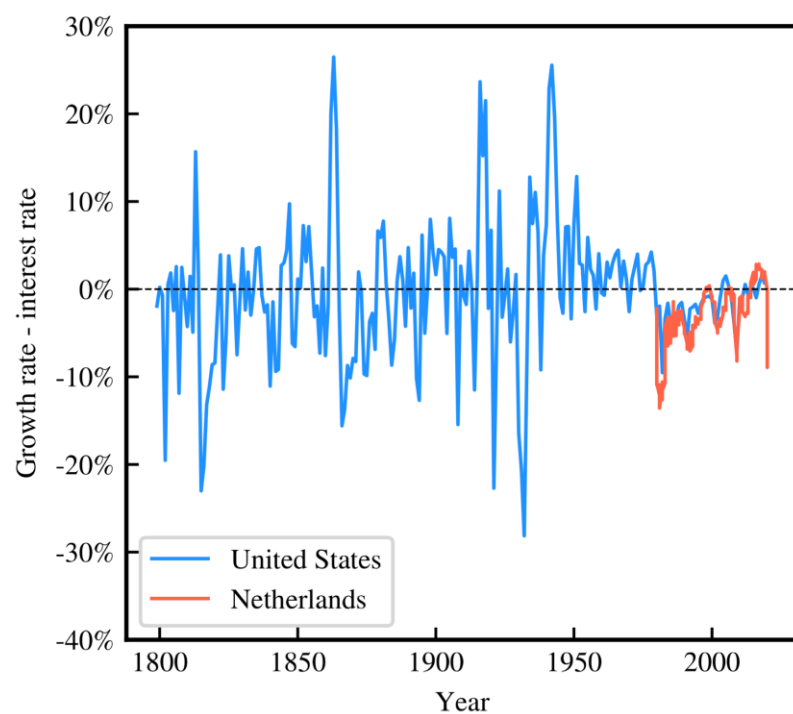
## Key factors



Savings



But even more:  $r-g$



<https://www.imf.org/external/datamapper/datasets>  
<https://www.measuringworth.com>

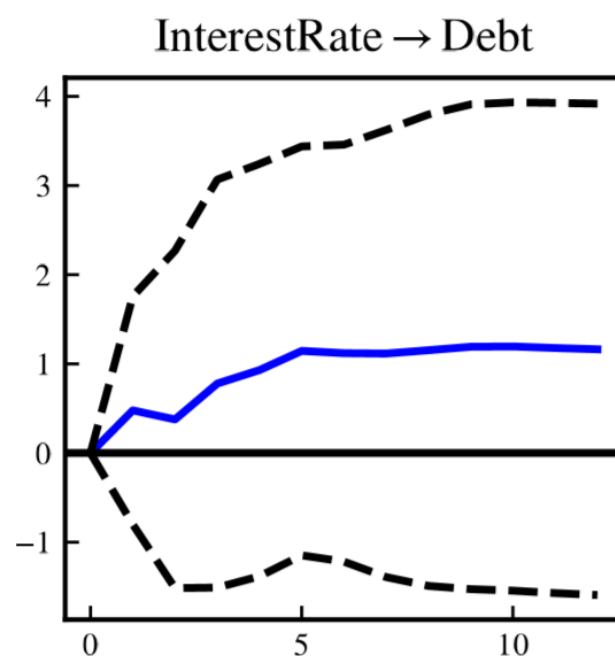
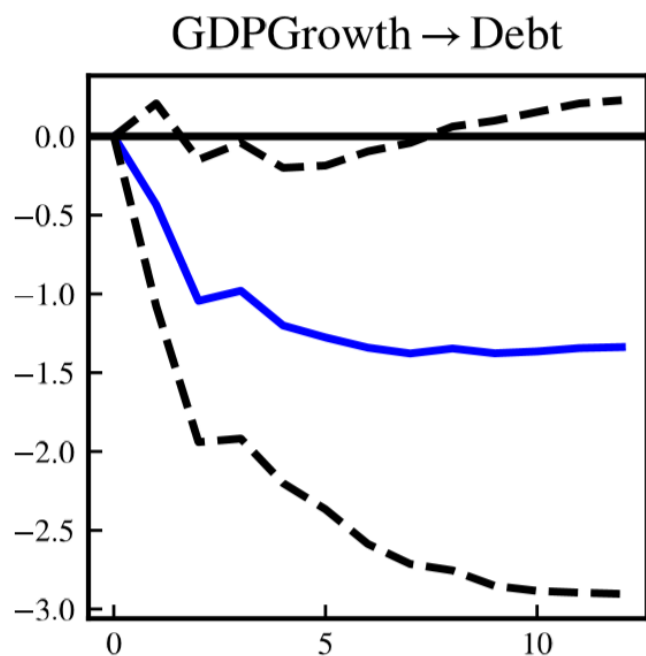
# Historical $r-g$



Before COVID: positive



But not clear to predict





# Conclusions

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- *Concise overview*
- *Literature shows: fiscal support works*
- *But it should be financed. Is this debt sustainable?*
- *$r-g$  is key factor but also hard to predict*
- *History shows: no problem*



# Thanks! Questions

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