

PAYGO vs Funded pensions : What's new?

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*“The Future of Pension Plans in Europe” Conference,
CIDEEFF, University of Lisbon, 28 February 2020*



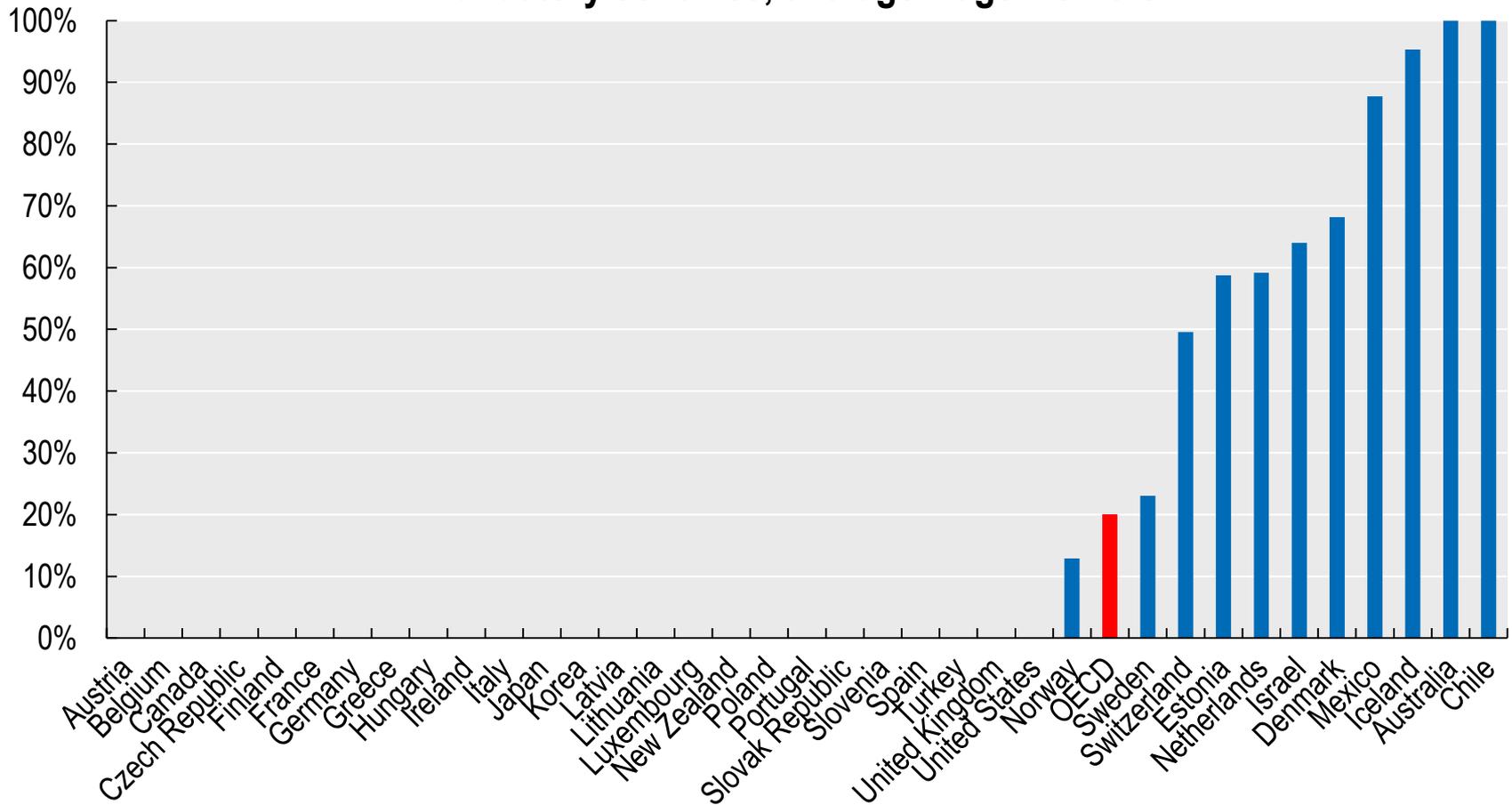
PAYGO vs Funded: What's new?

- Usual trade-offs between PAYGO and funded schemes
- Importance of “dynamic efficiency” condition to generate these trade-offs
- Several countries recently faced the big challenges triggered by shifting from PAYGO to funded pensions
- Context of persistently low interest rates puts into question whether dynamic efficiency still holds
- Large uncertainty limits the ability to draw drastic conclusions



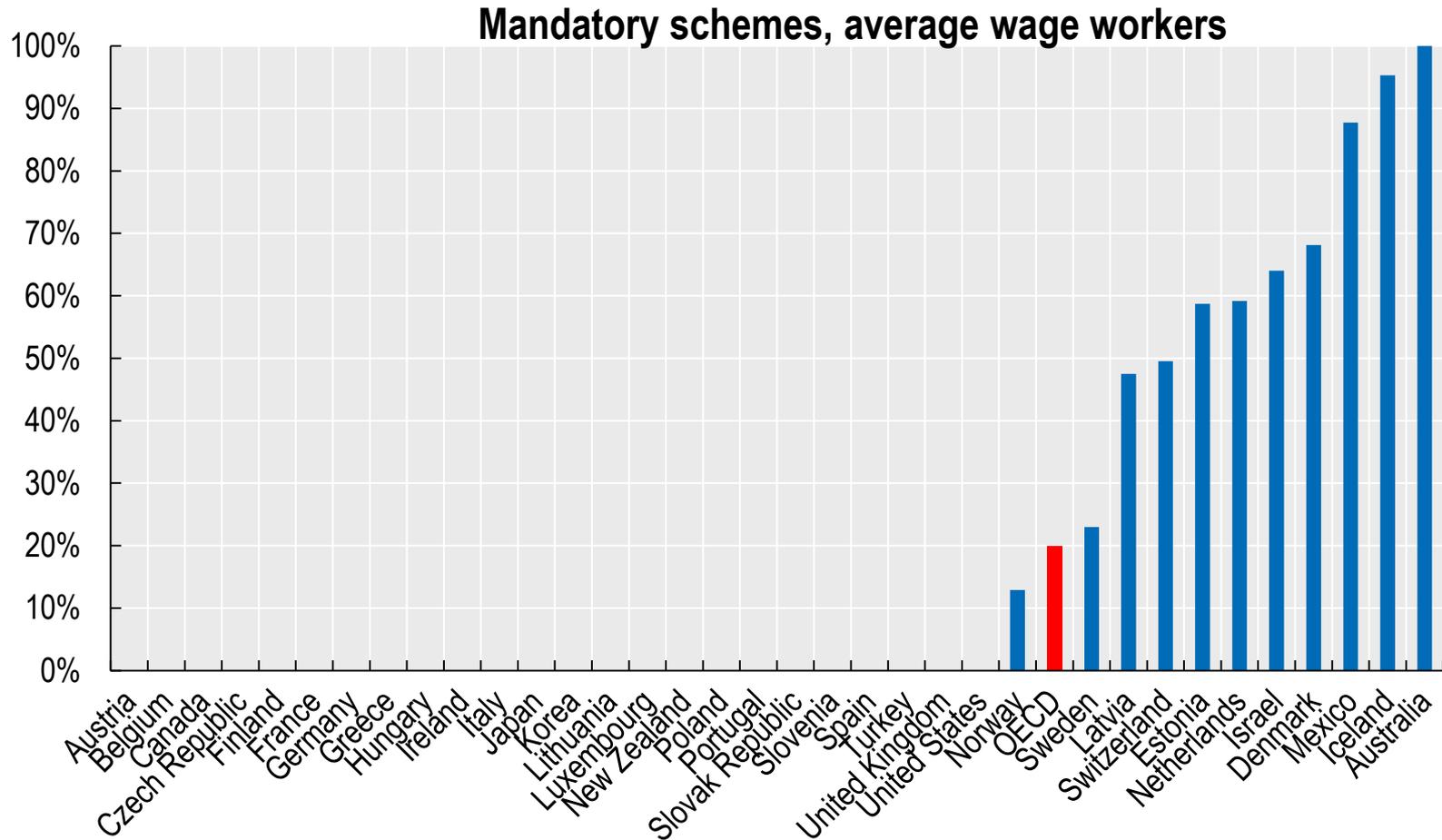
Share of funded schemes in future total pension entitlements

Mandatory schemes, average wage workers





Share of funded schemes in future total pension entitlements



Note: Some countries have partly funded PAYGO, such as Canada, Finland and KOREA, which is not accounted here.

Source: Country profiles in Pensions at a Glance (2019)



PAYGO pensions

- Internal rate of return:
 - rate of return financing the highest pension promises in a financially sustainable way
 - equal to the growth rate of contribution base
 - i.e. equal to the growth rate of the wage bill (stable contribution rate)
 - well proxied by growth rate of GDP, g
- Upon inception, first streams of contributions generate both extra revenues and implicit liabilities
- Can finance pensions for the first generation of retirees who have only partially contributed (“gift”)
- Can be used to build up reserves, reduce debt, finance other spending, etc.



Do funded pensions generate higher benefits?

- Rate of return: returns on financial assets, net of various fees, r
- Key assumption $r > g$: “dynamic efficiency”
- If verified, explicit returns in funded schemes exceed internal returns in PAYGO schemes
- Hence, funding would finance higher *future* pensions than PAYGO
- Funding (at least FDC) generates no implicit liabilities, but no gift either
- $r - g$ is closely related to an implicit tax when contributing to PAYGO pensions
- Actuarial equivalence: over time (i.e. discounted values of) implicit taxes amount to paying back the initial gift
- No free lunch: there is no direct intrinsic value in choosing to invest contributions in financial markets
- Essentially a redistribution matter: with PAYGO pensions, financial losses for future pensioners (if dynamic efficiency) and for (private) pension providers finance the initial gift to its beneficiaries



PAYGO vs Funded: beyond $r - g$

- Returns are uncertain in both PAYGO and funded, and the nature of underlying risks differs widely
- Diversification of pension assets, sources of financing and types of risks
- Development of financial markets: this argument applies better to countries with under-developed financial markets. Even in that case, investment in domestic or international financial assets?
- Funding increase private savings ... but public savings might be negatively affected with ambiguous effects on total savings



Recent experiences of so-called pension reversals

- Building up funded schemes is easier when working-age to old-age population ratios are high: relatively low contribution rates are enough to finance a good level of PAYGO pensions
- Shifting part of contributions from PAYGO to funded pensions generates similar trade-offs
- When contribution rates are high, when ageing is already advanced and public finance pressure is tight: this is more difficult
- Possible gains by future pensioners are offset by losses suffered by those who must finance entitlements which accrued under PAYGO
- Transition costs rise as implicit liabilities gradually become explicit
- The costs can be large and their burden difficult to accept politically
- Many countries in Latin America and CEE reversed course



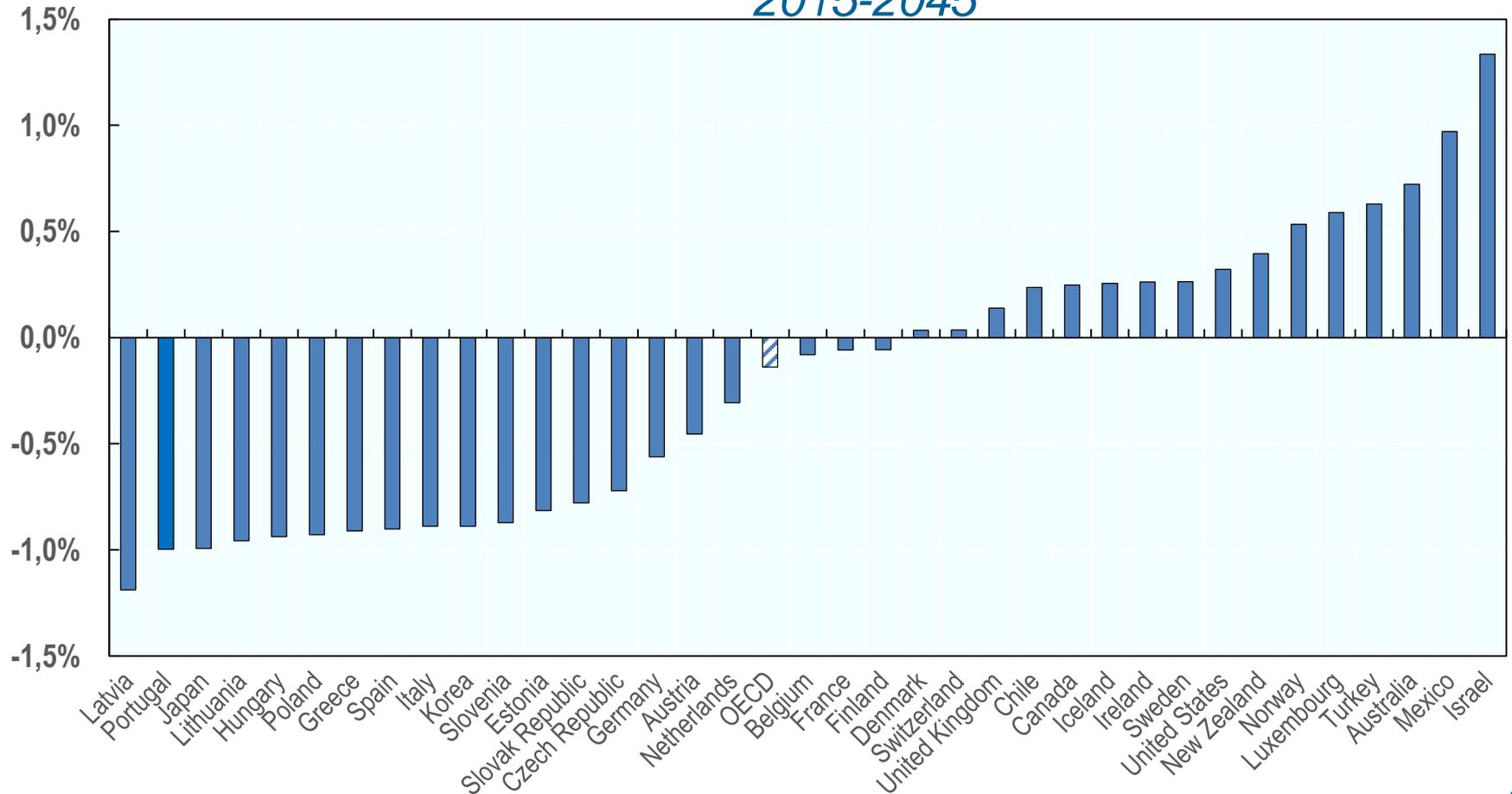
Low interest-rates environment

- Solvency issues of funded DB schemes (discounting future liabilities) are abstracted here
- Key question relates to the determinants as what matters for this presentation is $r - g$
- If focusing on the impact of ageing on labour supply, then it is likely to affect both r and g



Sharp projected decline in the size of the working-age population in some countries

Average annual growth in the working-age population (20-64), 2015-2045





Low interest-rates environment

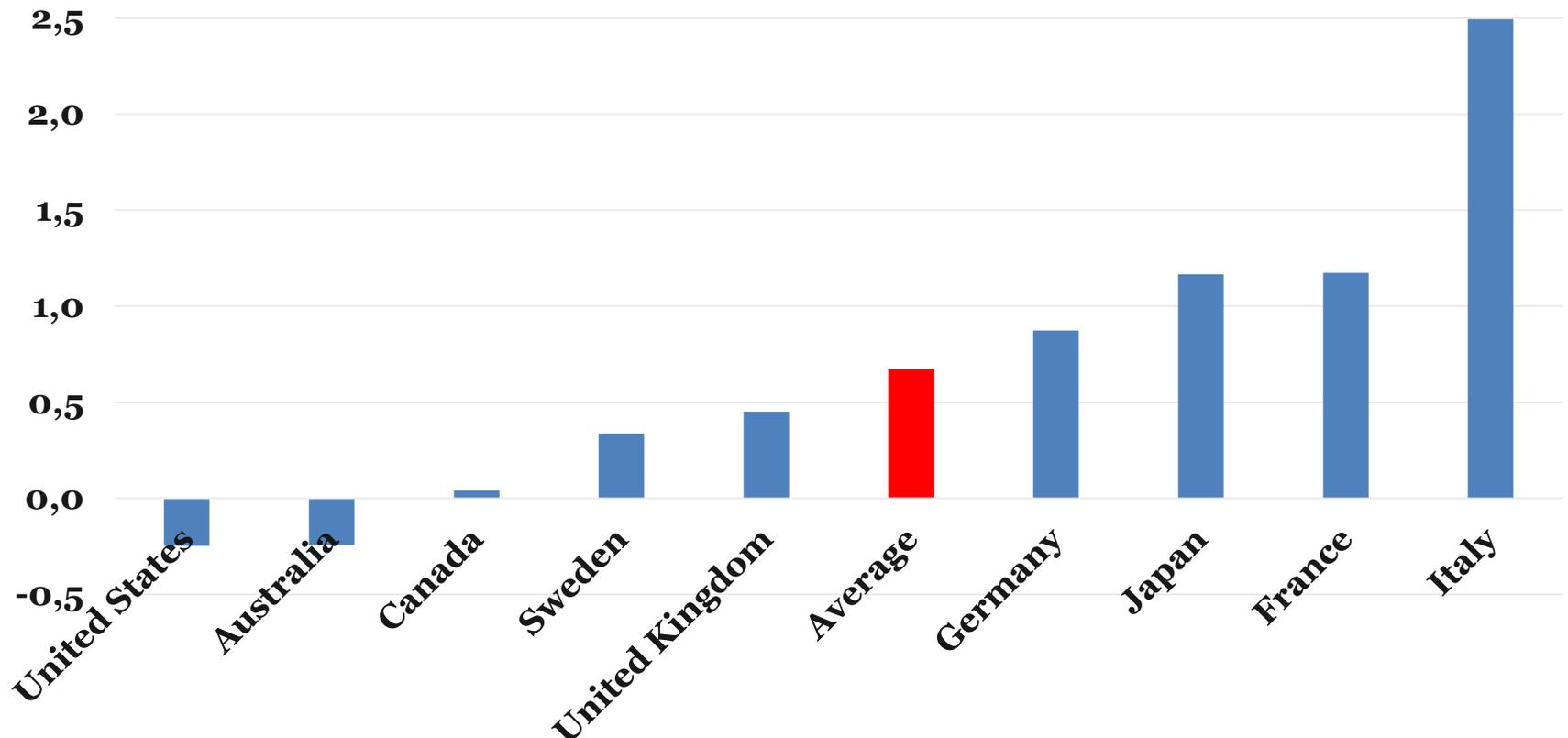
- Key question relates to the determinants as what matters for this presentation is $r - g$
- If focusing on the impact of ageing on labour supply, then it is likely to affect both r and g
- If resulting from a structural shift in financial market equilibrium, due to e.g. persistent changes in monetary policies or the impact of ageing on savings behaviours, then $r - g$ might (have) decline(d) “permanently”



Dynamic efficiency?

long-term government bond rates as r

$r-g$, average over 1992-2018, %



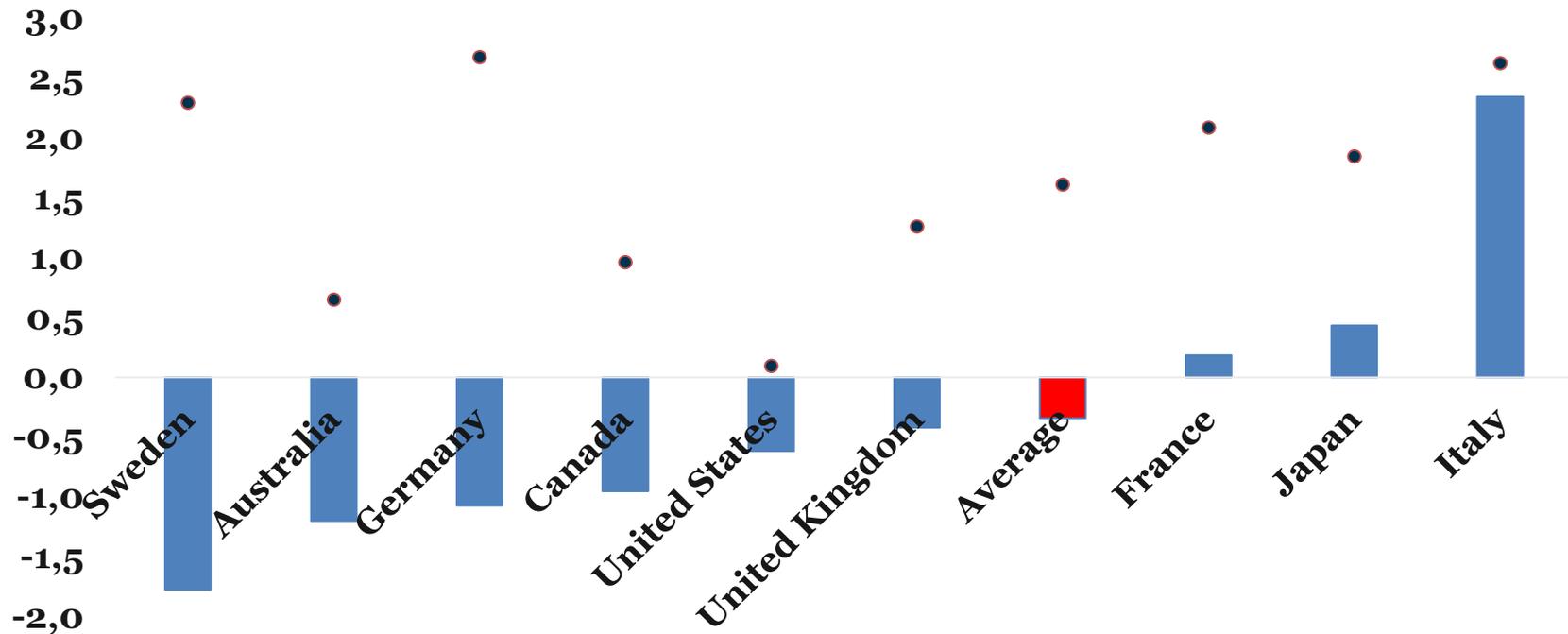


Dynamic efficiency?

long-term government bond rates as r

r has declined faster than g

■ $r-g$ 2006-2018 ● $r-g$ 1992-2005





Unusual features of dynamic inefficiency

- Dynamic efficiency is a concept introduced to analyse the welfare impact of public debt
- $r > g$ means that the stock of capital is below that implied by the golden rule ($r = g$), hence the overall benefits driven by higher savings and investments
- With $r < g$, debt is self-financing: issuing debt can lead to Pareto improvements
- Transition costs would therefore be low
- But benefits from moving to funded are similarly affected by changes in $r - g$: there is no free lunch



Which r ?

- Risk-free rates, r^* ?
- Rates of return on risky assets $r^\#$: large range of assets?
- Domestic vs international?
- How to account for uncertainty about long-term growth g ?
- Blanchard (2019) shows that both r^* and $r^\#$ matter
- If inefficiency ($r^* < r^\# < g$) then PAYGO is Pareto superior
- But developed economies have tended to move from dynamic efficiency ($g < r^* < r^\#$) to something more ambiguous ($r^* < g < r^\#$?) which introduces some elements of inefficiency but without totally clear outcomes



Conclusion

- No free lunch: with dynamic efficiency, the choice between funded and PAYGO is essentially a distributional matter, generating winners and losers and raising equity issues across generations
- The most compelling reason to support a mixed system relates to the benefit generated by risk diversification
- Shifting from PAYGO to funded generates large, first-order transition costs that might be difficult to endorse politically depending on the wider economic context
- Persistently low interest rates have brought some elements of dynamic inefficiency, which limits the attractiveness of funded schemes
- However, uncertainty is large, and the situation can revert back to a more “normal” setting generating the usual trade-offs

Contact

Pensions at a Glance 2019
OECD et G20 Indicators

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