

DANMARKS NATIONALBANK

9 MARCH 2023 — NO. 193

Drivers of Real Interest Rates in A Two-country, General-equilibrium, OLG Model

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Abstract

What can explain the long-term decline in equilibrium real interest rates? We analyze the importance of three of the most cited drivers; decreasing fertility, decreasing mortality, and a slowdown of technological growth. We do this through the lens of a general-equilibrium, two-country, overlapping generations model with international capital markets and trade in goods. Using the US as a proxy for the world economy, we find that all three factors put downward pressure on the global real interest rate. The model predicts a 2.25 percentage point decrease from 1950 until today with falling mortality generating most of the decline. We calibrate the second country on Danish data and show how differences in mortality can help explain the build-up of the large Danish net foreign asset position. Our results suggest that the secular decline in real interest rates is not fully over; the drivers considered in this analysis are likely to depress real interest rates by another 0.25 percentage points going forward from today until 2050.

Resume

Hvad kan forklare det langsigtede fald i ligevægtsrealrenter? Vi analyserer tre af de mest citerede årsager: faldende fertilitet, faldende dødelighed og en opbremsning af teknologisk vækst. Analysen foretages i en overlappende generationsmodel for to lande og med generel ligevægt, hvor der er anvendt internationale kapitalmarkeder og handel med varer. Ved at bruge USA som en proxy for verdensøkonomien viser vi først, at alle tre faktorer lægger et nedadgående pres på realrenten. Modellen peger på et fald på 2,25 procentpoint fra 1950 og indtil i dag, hvor faldende dødelighed er den vigtigste drivkraft bag faldet. Vi kalibrerer det andet land på danske data og viser, hvordan forskelle i dødelighed kan bidrage til at forklare opbygningen af den store danske nettoformue over for udlandet. Vores resultater peger på, at det sekulære fald i realrenterne ikke er forbi; de faktorer, der tages i betragtning i denne analyse, vil sandsynligvis reducere realrenten med yderligere 0,25 procentpoint fra niveauet i dag og frem mod 2050.

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