BANK OF ENGLAND

Running out of room: Revisiting the 3D perspective on low interest rates

26 July 2021

Gertjan Vlieghe

Outline

2016

- Demographics, debt, distribution of income have pushed down neutral rate
- Policy implication:
  - Low policy rate not as stimulative as you think
  - Patience before lift-off

2021

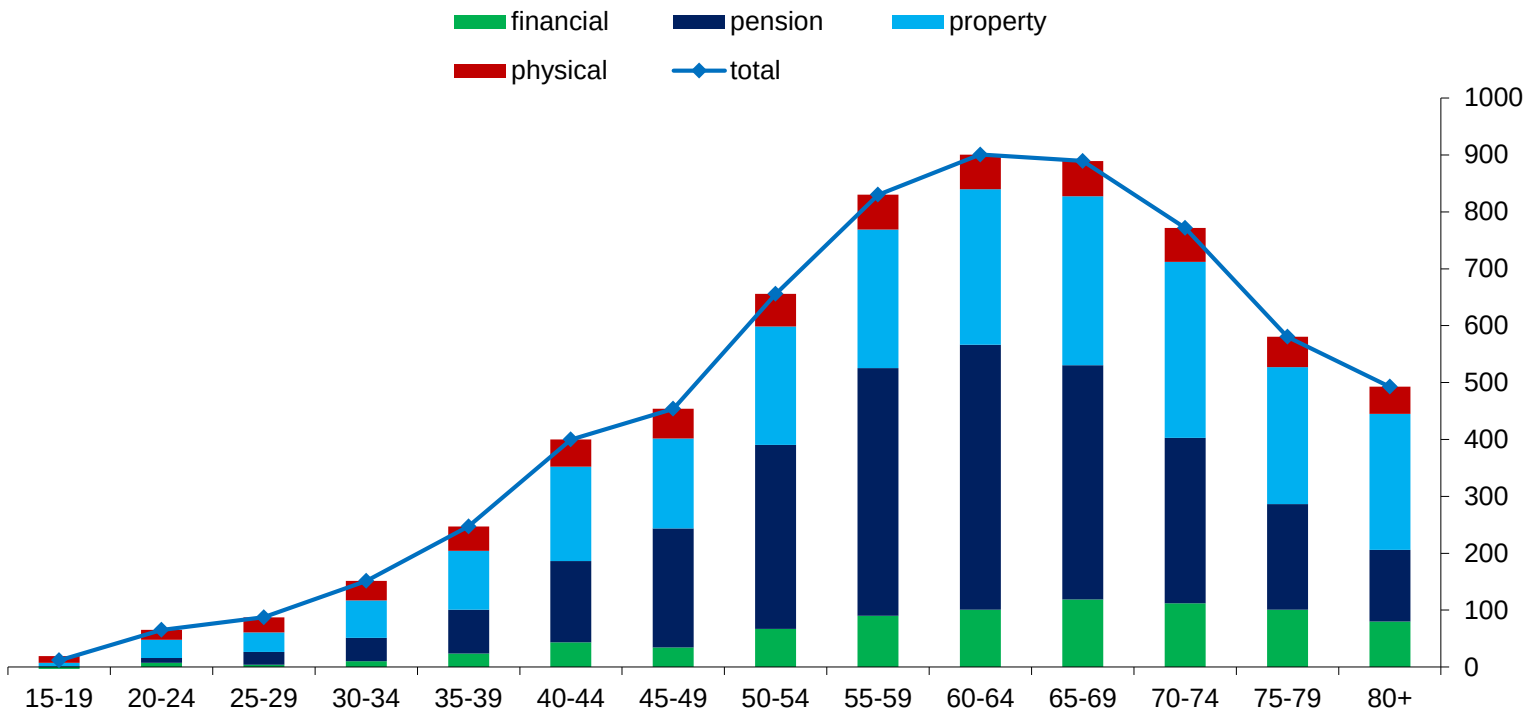
- What have we learned about 3D mechanism since 2016?
- New policy implications?

Demographics

- Lower fertility and rise in longevity leads to population ageing
- Macro implication: lower r*
  - More people want to hold high stock of savings
  - Higher desired saving of middle-aged quantitatively dominates moderate dis-saving of the old
  - Older people have preference for safe assets

Chart 1: Average wealth by age group

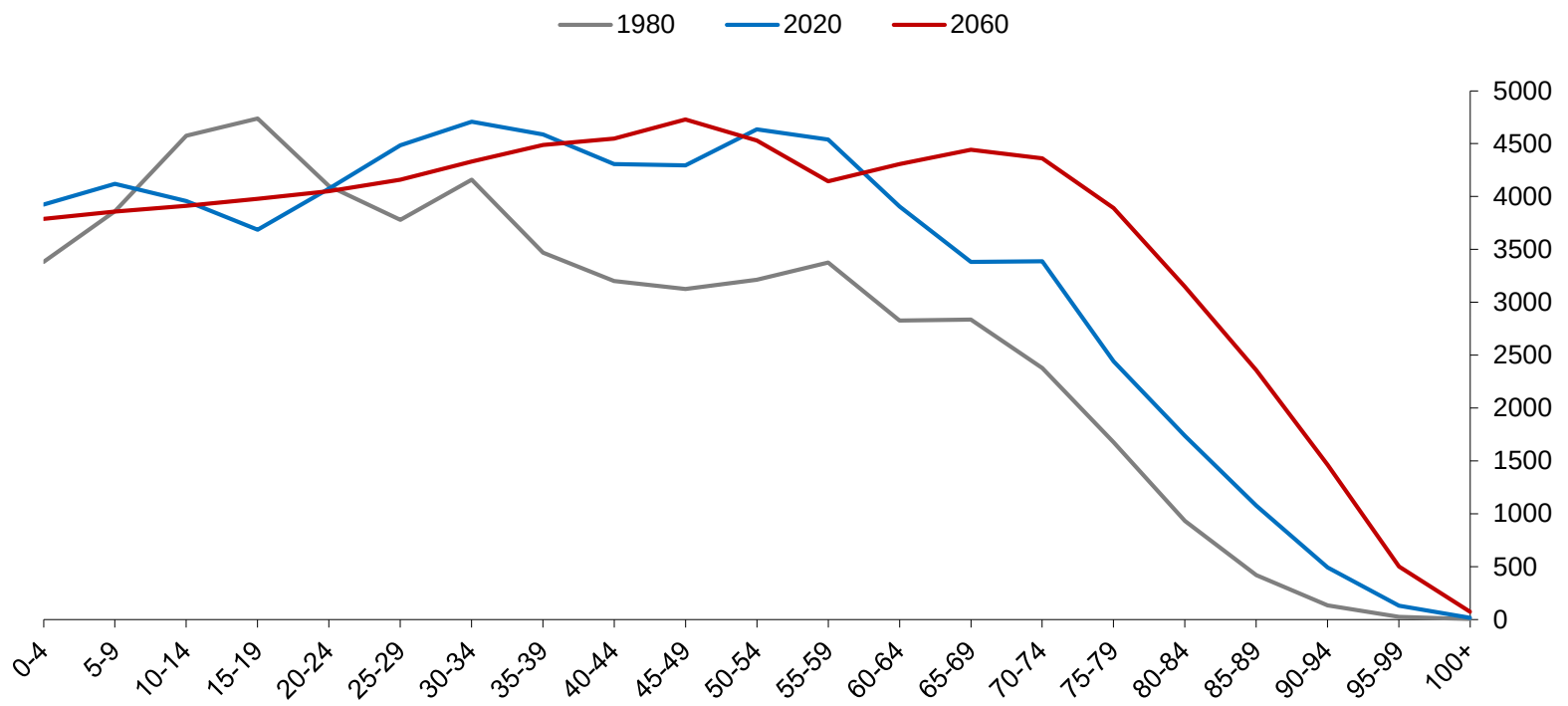
GBP thousands



Sources: UK Wealth and Asset Survey and Bank calculations. Notes: Chart shows weighted average wealth by age group from round 6 of the UK Wealth and Asset Survey. This data was collected between 2016 and 2018.

Chart 2: UK age distribution over time

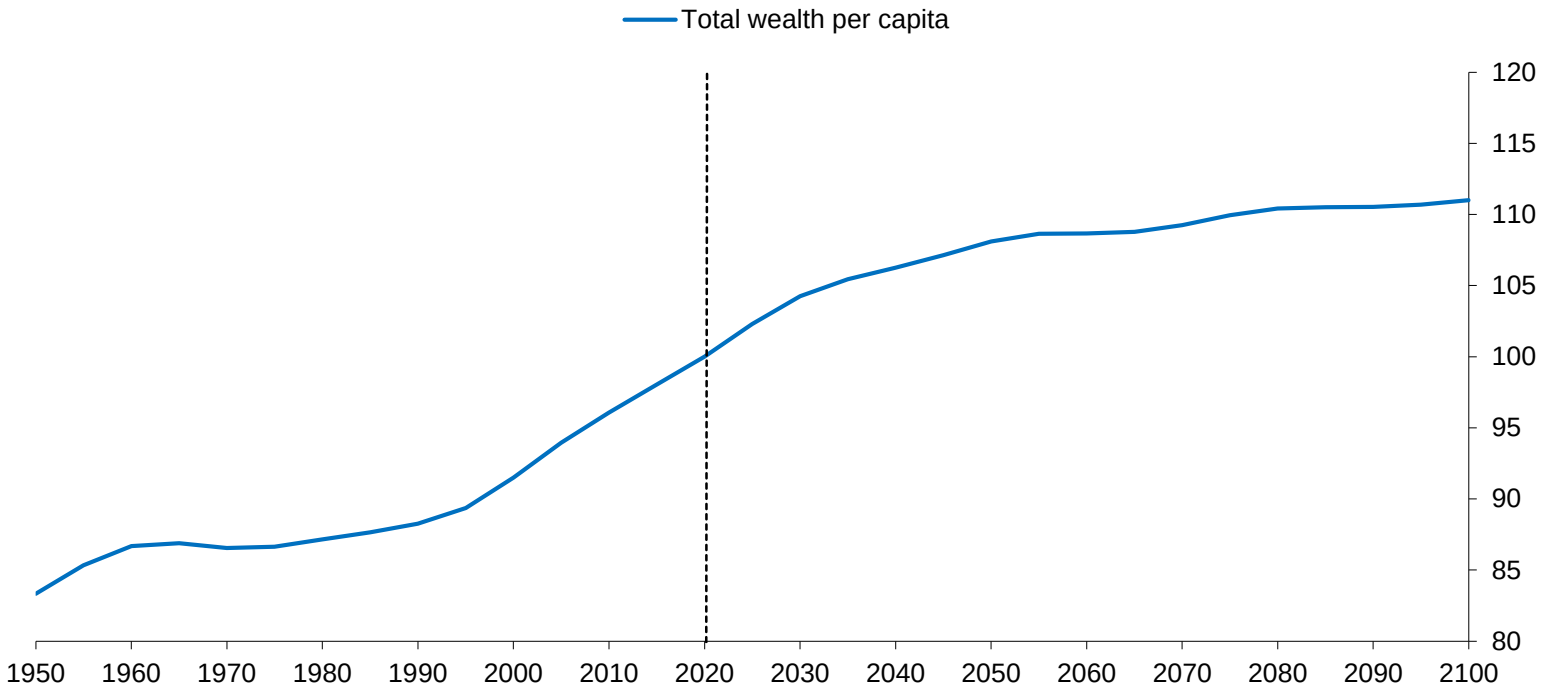
Thousands of population



Source: UN Population Prospects.

Chart 3: Stock of total wealth per capita at current wealth-age profile

index 2020 = 100



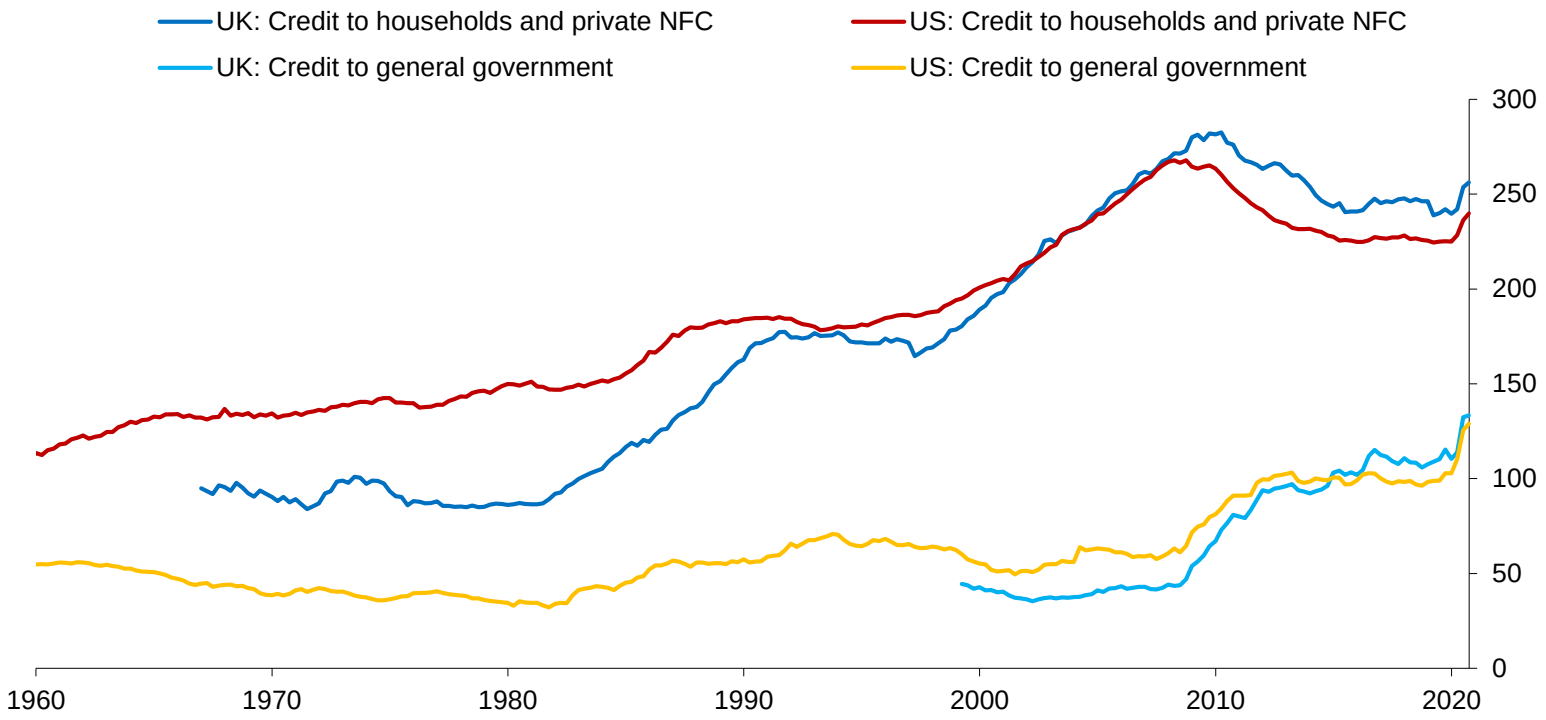
Sources: UN Population Prospects, UK Wealth and Asset Survey, and Bank calculations.
Notes: Total stock of wealth is calculated by holding the current wealth-age profile (from round 6 of the WAS) constant and multiplying with the respective age profile of the latest UN Population Prospects. To control for overall population growth, the aggregate is then divided by total (projected) population.

Income inequality and debt

- More income to those with lower marginal propensity to spend → lower r*
- Persistent income inequality leads to wealth inequality, “stock” effect
- Interaction between income inequality and debt
  - Higher desired asset holdings act as credit supply shock, increases debt and lowers r*
  - Higher debt means higher macro risk (higher probability and severity of crisis), lowers r*
  - Indebted demand: higher debt now leads to lower demand in future , lowers r*
- Interaction with lower bound
  - Lower r* + ELB → limited policy space → more macro risk → lower r*

Chart 4: Private and public debt in UK and US

Percent of nominal GDP

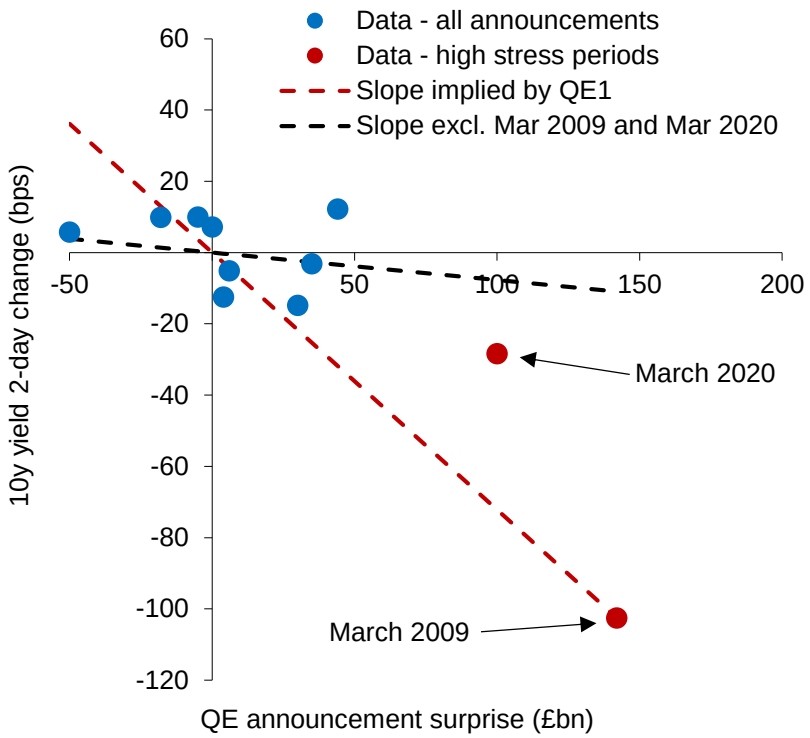


Sources: Bank for International Settlements and Bank calculations.
Latest observation: 2020Q4.

Limited monetary policy space, even with QE

- QE can lower rate expectations and help anchor inflation expectations
- QE has powerful temporarily liquidity effects in dysfunctional markets

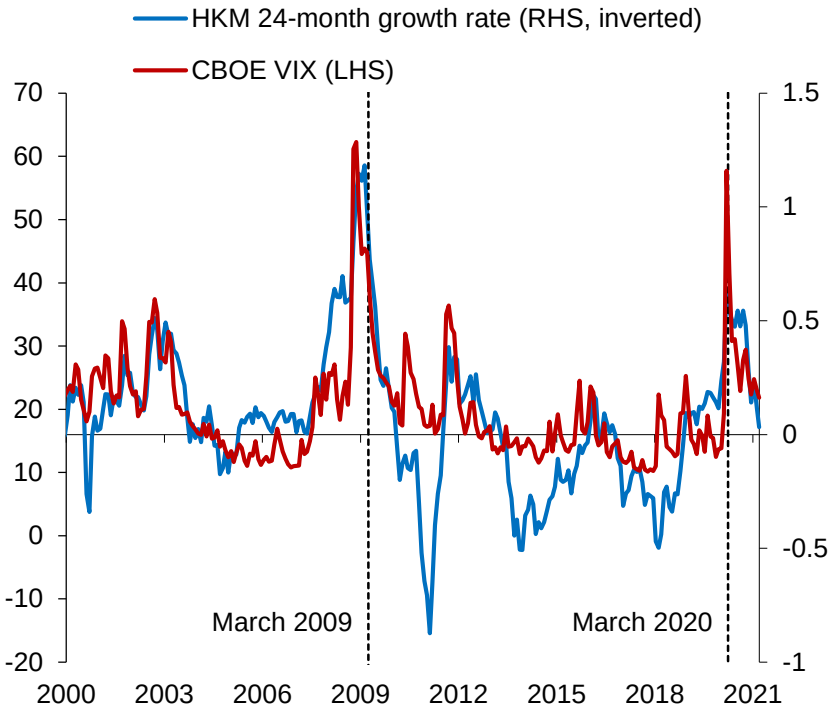
Chart 5: Yield impact of QE announcements



Sources: Bloomberg Finance L.P, Tradeweb and Bank of England calculations.

Chart 6: Measures of market liquidity

Index and percent growth



Sources: Refinitiv Eikon and He, Kelly, and Manela (2017).
Latest observation: December 2020.

Monetary policy strategy

- QE headroom measured in basis points, not billions
- QE pace matters
- Communication is crucial: be clear about desired future policy stance

Increasing headroom for monetary policy

- Monetary stance: $r - r^*$
- Decompose $r = R - \pi^e$
- So total policy space is $R - \pi^e - r^*$

Increasing headroom for monetary policy

Three ways to increase policy space

- Lower R
- Higher π^e
- Higher r^*

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