



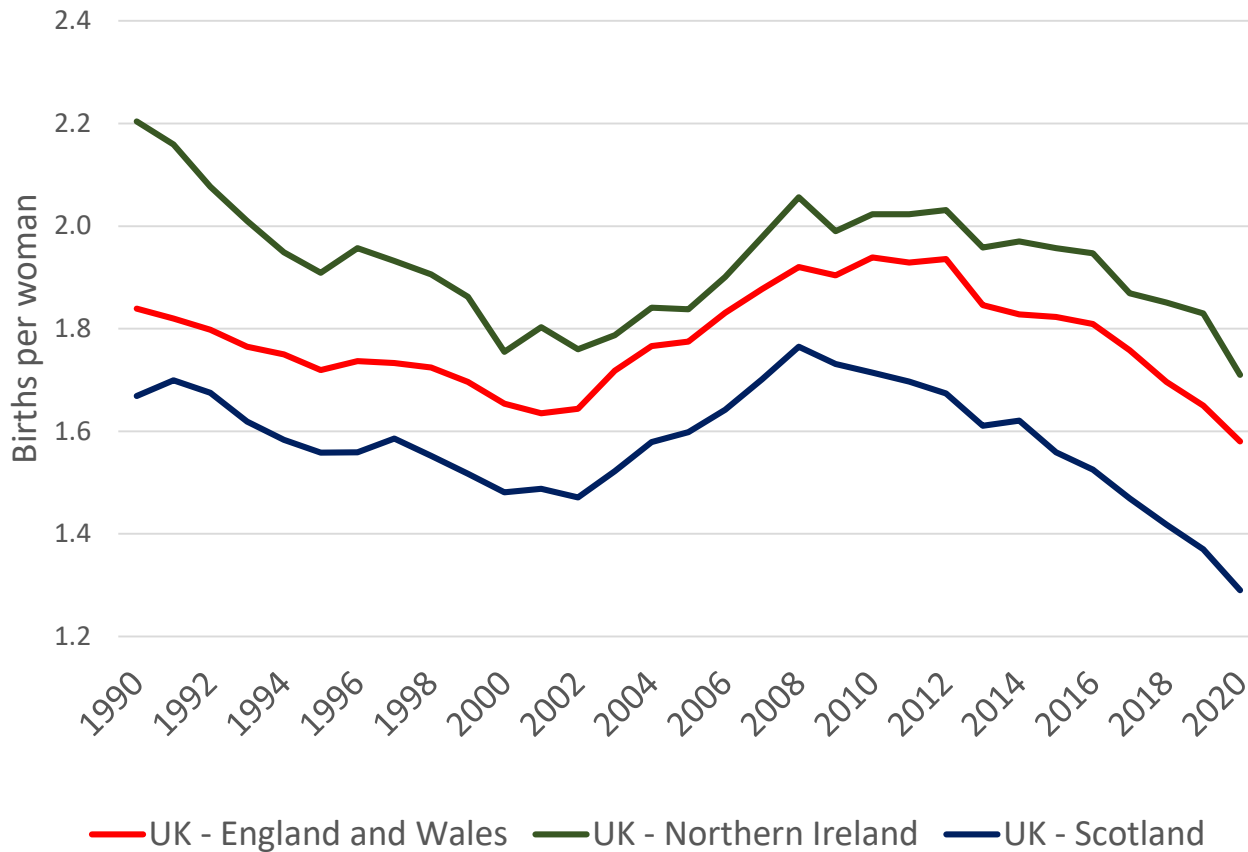
# Scenario-based fertility projections incorporating impacts of COVID-19

MPIDR Pandemic Babies Conference, 14<sup>th</sup> December 2021

Ann Berrington, Joanne Ellison, Bernice Kuang, Sindhu Vasireddy, Hill Kulu

# Motivation: Pandemic “baby-boom” or “baby-bust” in context of declining fertility

## TFR in England and Wales, Scotland and Northern Ireland 1990-2020



Source: ONS, NRS, NISRA



Ann Berrington  
Joanne Ellison  
Bernice Kuang  
Sindhu Vasireddy  
Hill Kulu

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[http://www.cpc.ac.uk/docs/WP\\_95\\_Recent\\_trends\\_in\\_UK\\_fertility.pdf](http://www.cpc.ac.uk/docs/WP_95_Recent_trends_in_UK_fertility.pdf)

# Aims

- To identify potential mechanisms through which the pandemic could affect UK fertility.
- To incorporate some “informed” assumptions into scenario-based population projections 2021-2023.
- To estimate the number of births which might/ might not take place due to the pandemic under these scenarios

# Potential mechanisms

**Downward** pressures include:

- Less sexual activity as fewer opportunities to socialise outside home
- Increased inter-generational co-residence
- Difficulties in finding and moving to new home
- Increased economic uncertainties
- Postponed weddings
- Concerns re. health risks of COVID for pregnant women / babies
- Concerns re. access to health services during pandemic
- Lack of access to Assisted Reproductive Technologies
- Concerns re. social isolation, lack of social support for raising child
- Stress of childcare / homeschooling – deter from further childbearing

# Potential mechanisms

Mechanisms will differ by age, parity

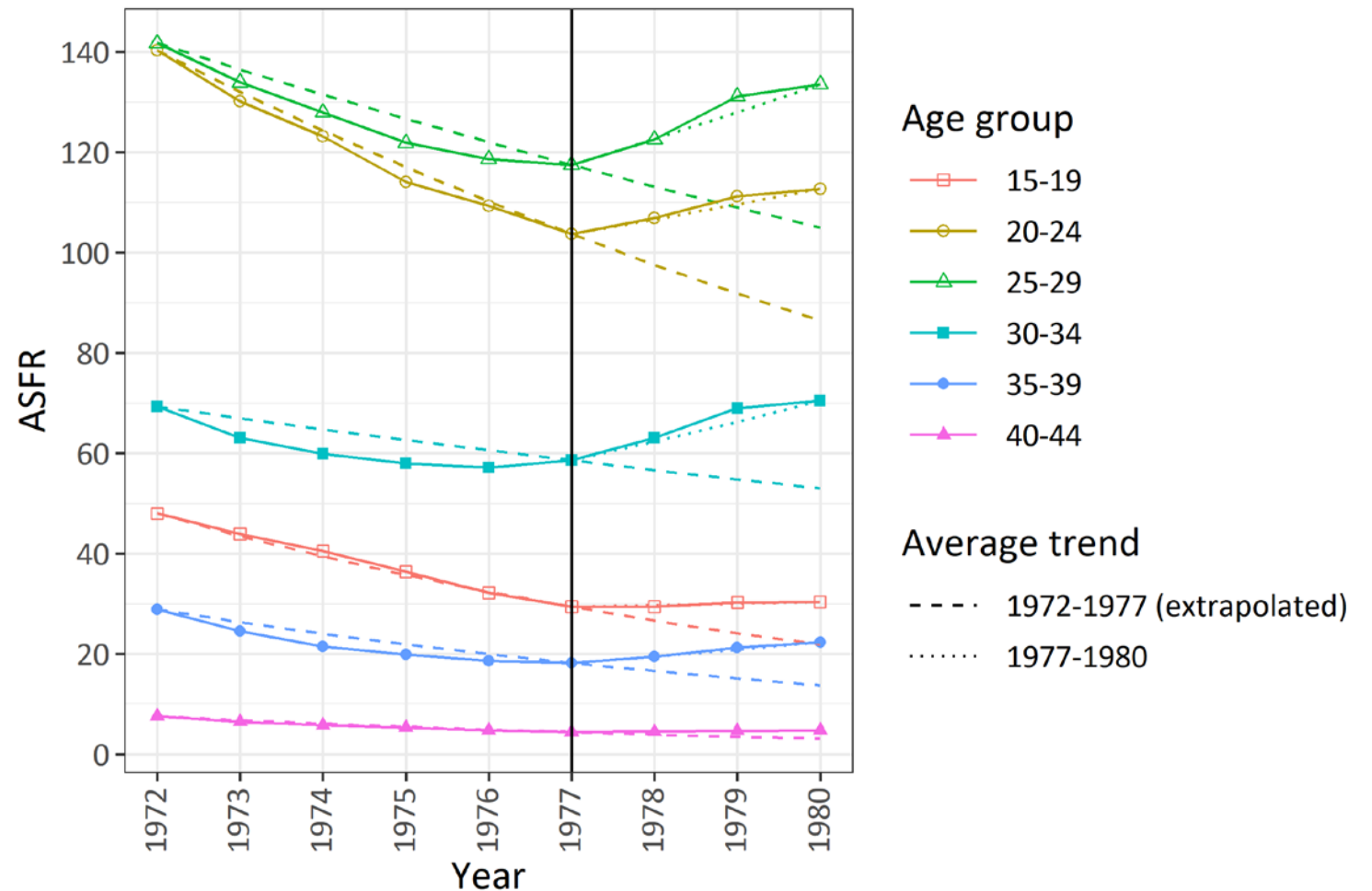
**Upward** pressures include:

- Perceived / actual reduced access to contraception and abortion services
- More opportunity for sexual activity among those who moved in together at start of lockdown in March 2020
- More time spent with partner at home
- Increased economic uncertainties – reductions in economic opportunity costs for some
- More focus on family life, working from home, re-evaluation of priorities – less postponement
- Wealthier families save more during pandemic – children more affordable

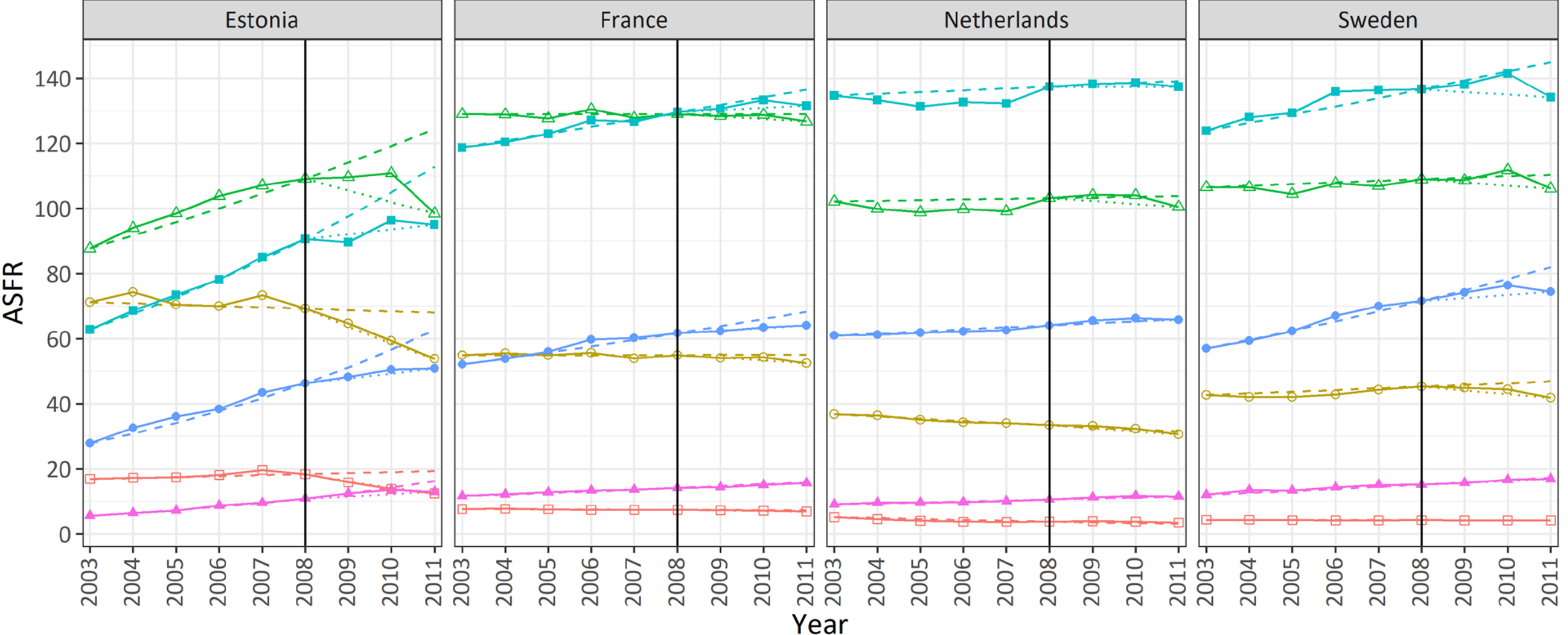
# Quantifying the possible effect of COVID

- Learning from history:
  - Baby boom: 1977-1980 pill scare in E & W
  - Baby bust: 2008-2011 economic recession in NW Europe

Actual (solid line) and projected (dashed line) TFR England and Wales, 1972-1980



# Response of ASFRs to 2008 recession, selected countries



Age group

- 15-19
- △ 25-29
- 35-39
- 20-24
- 30-34
- ▲ 40-44

Average trend

- 2003-2008 (extrapolated)
- ..... 2008-2011

# Annual adjustment factors to ASFRS under Baby Boom and Baby Bust Scenarios

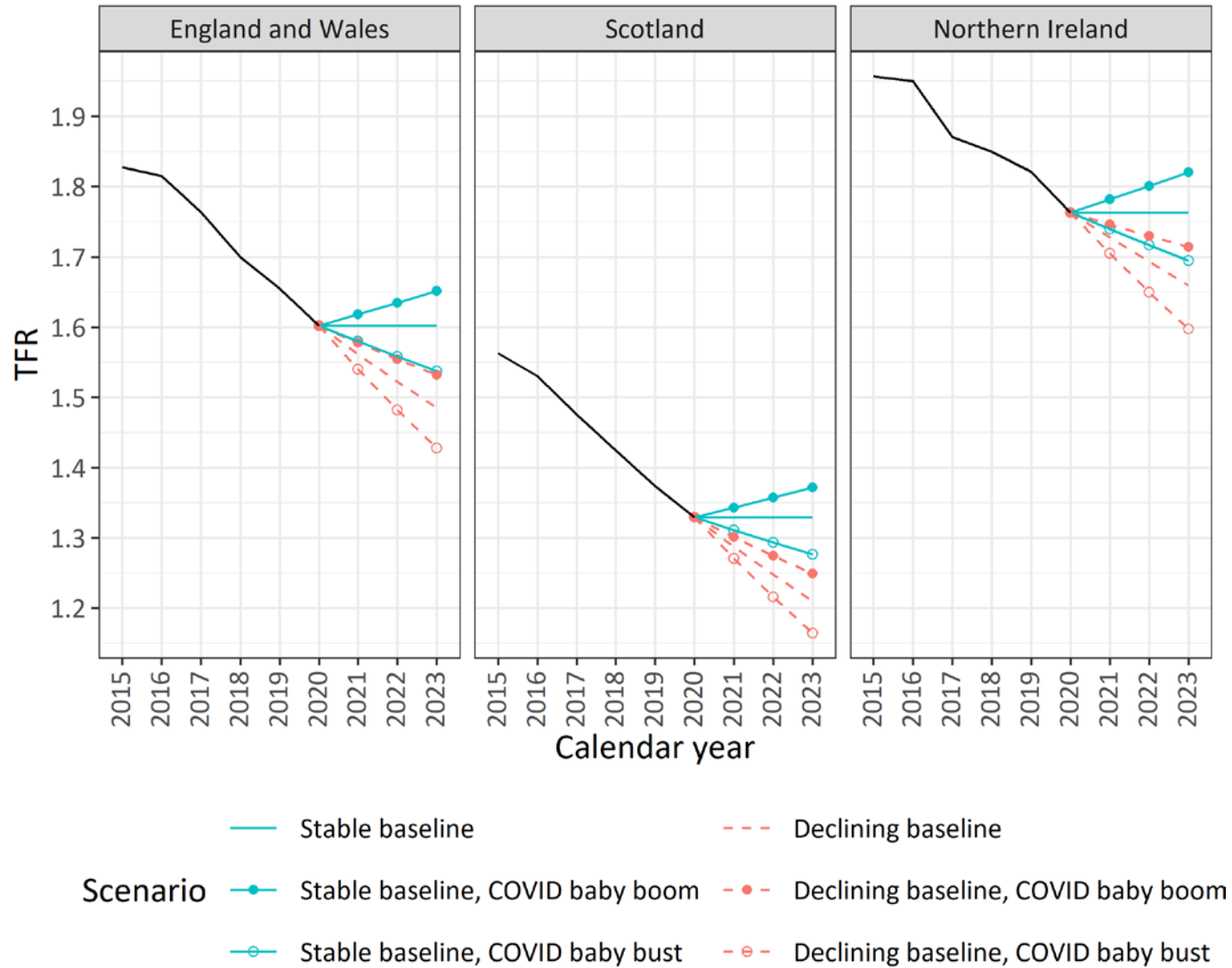
Age group	COVID-19 Baby Boom	COVID-19 Baby Bust
15-19	1.00	0.95
20-29	1.00	0.97
30-39	1.02	1.00
40-44	1.00	1.00



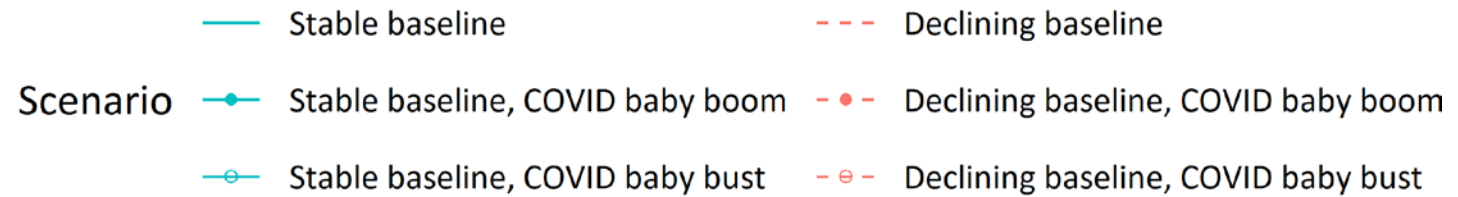
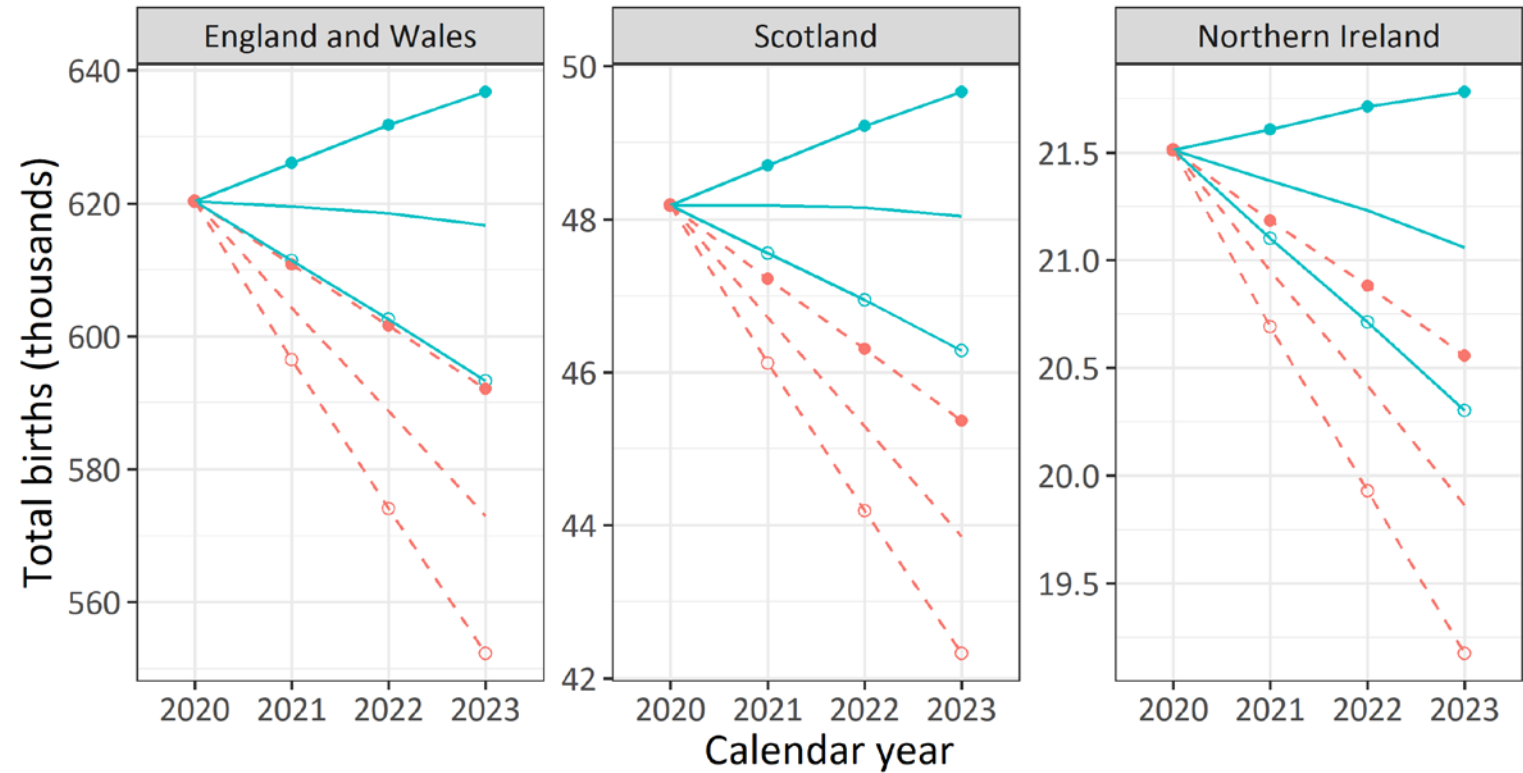
# Our approach: Four scenarios

Scenario	Assumptions
1. Stable baseline, COVID Baby Boom	Baseline trend is <b>continuation of 2020 ASFRs</b> . Adjustment due to COVID assumed to be zero for those <30 and those 40+. <b>2% increase for those aged 30-39.</b>
2. Stable baseline, COVID Baby Bust	Baseline trend is <b>continuation of 2020 ASFRs</b> . <b>Fertility rates &lt;30 reduced by 3-5%</b> . Fertility 30+ zero change.
3. Declining baseline, COVID Baby Boom	Baseline trend is continuation of <b>past 5 years</b> trend. Adjustment due to COVID assumed to be zero for those <30 and those 40+. <b>2% increase for those aged 30-39.</b>
4. Declining baseline, Baby Bust	Baseline trend is continuation of <b>past 5 years</b> trend. <b>Fertility rates &lt;30 reduced by 3-5%</b> . Fertility 30+ zero change.

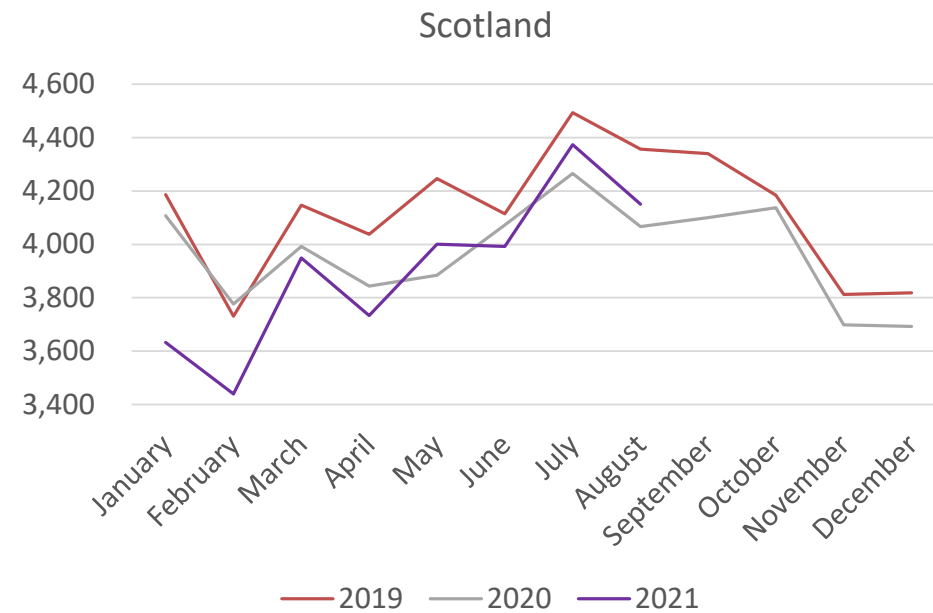
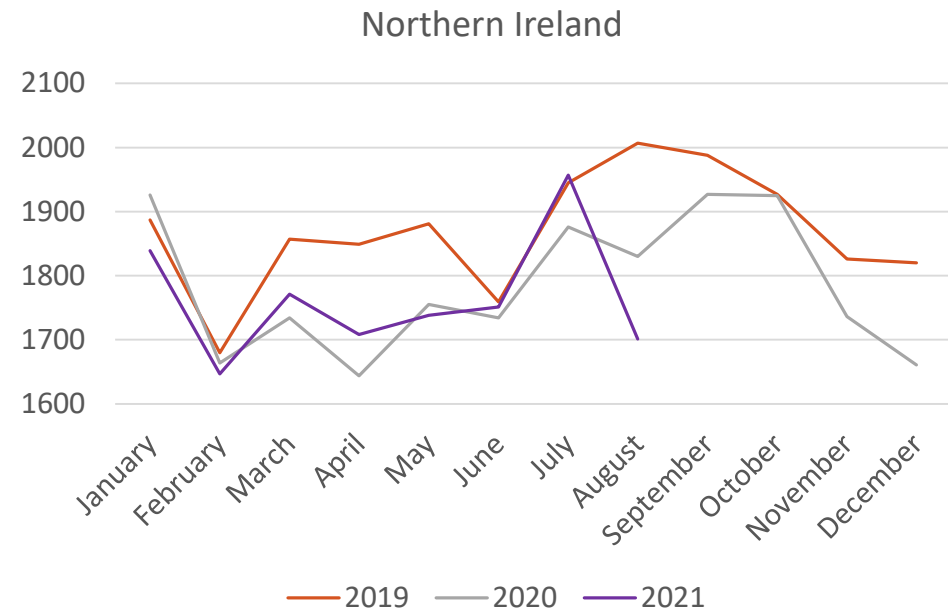
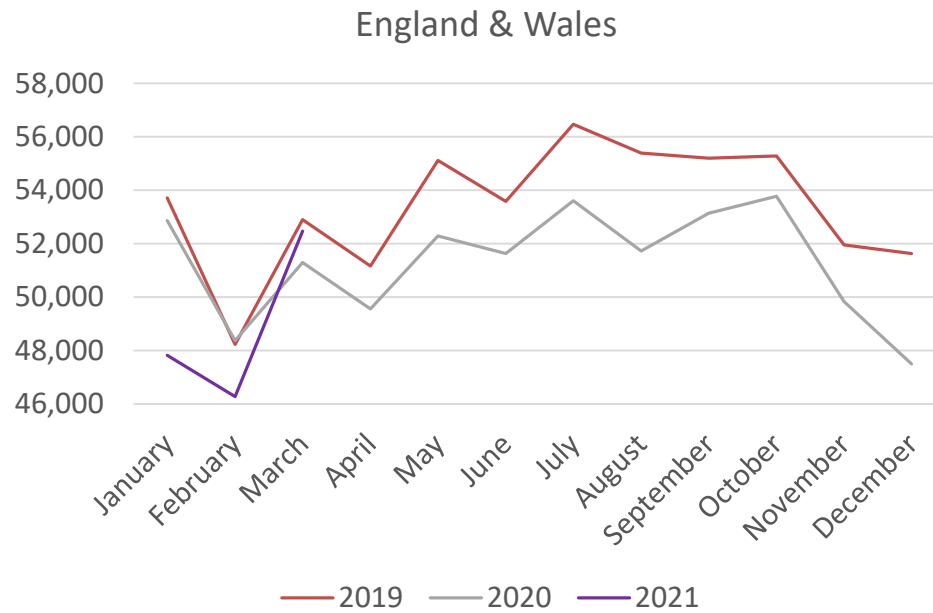
# Projected TFR under the 4 scenarios



# Projected number of births under the 4 scenarios



# Actual monthly births 2019-2021



# Summary

- Fertility **already reached lowest** level in UK pre COVID
- 2018-NPP **under-estimated** decline in fertility pre COVID
- Projections through to 2023 affected significantly by assumptions re **baseline trend**
- The scenarios produce **range of possible** TFRs in 2023 (England & Wales: 1.43-1.65; Scotland: 1.16-1.37; NI: 1.60-1.82)
- Under our assumptions COVID Baby Boom would result **in 20,000 extra births** for England & Wales, whereas baby bust scenario would result in **20,000-23,000 fewer births in 2023**
- Overall impact of COVID **may not be that large** due to counteracting effects at different ages
- This is borne out by **preliminary data on monthly births** for UK

# Acknowledgements

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Ann Berrington  
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