

# 2022 Fiscal risks and sustainability

Transcript of Presentation by:

Richard Hughes, Chair, Office for Budget Responsibility

7 July 2022

## 1. Opening slide

## 2. Introduction

- Good morning everyone and welcome to this online presentation of our *2022 Fiscal risks and sustainability* report. Thank you for joining us.
- I am going to take you through the highlights of the report, and we'll then go onto an online question and answer session chaired by our Deputy Chief of Staff Laura Gardiner.
- My slides and speaking notes are now available on our website.
- If you would like to ask a question at any point, please use the Q&A feature, and Andy, David, and I will try to answer as many as possible. Please give your name and institution.

## 3. Integrating risk and sustainability analysis

- Let me start by providing some background on this report and, in particular, on why we've chosen to combine the analysis that used to appear separately in our biennial *Fiscal sustainability reports* and *Fiscal risks reports*.
- 20 years ago, in 2002, the UK Treasury produced the country's first Long-term Public Finance Report – the precursor to our long-term fiscal projections.
- At the time, government debt stood at 28 per cent of GDP, the deficit was about ½ a per cent of GDP, the economy was growing at an average rate of 2¾ per cent, and inflation was running at 1.3 per cent.
- The Treasury's pioneering 50-year fiscal projections predicted that government debt this year, 2022, would stay just below 40 per cent of GDP – consistent with the fiscal rules in place at the time.

- As we now know, debt this year is expected to be more than twice that at 96 per cent of GDP.
- So how did we get here, with a Government so much more indebted than the Treasury predicted 20 years ago?
- Part of the answer is that, over the past two decades, the UK economy has been buffeted by an unprecedented series of global shocks including a financial crisis, a pandemic, a major war on the European continent, and an energy crisis.
- And each of these shocks has also had major repercussions for fiscal policy, with governments taking on new and sometimes unprecedented roles, including:
  - nationalising and running the country's largest banks;
  - paying the wages of around one-third of all employees;
  - and now paying for about one-half the increase in household energy bills.
- And working away in the background as this series of crises unfolded were a set of longer-term pressures on the public finances:
  - the number of people aged 65 and over rose by 3½ million from 9½ to 13 million people;
  - we learned that global temperatures had already risen by 1 degree Celsius and were on track to rise by 4 degrees by the end of this century;
  - and having fallen from over 5 per cent in 2002 to less than ½ a per cent in 2020, interest rates on government debt are now back up to 2 per cent.
- So the trillion-pound gap between the under 40 per cent of GDP in government debt which the Treasury predicted twenty years ago and over 90 per cent of GDP in debt which we ended up with is a measure of the importance of understanding both:
  - the pressures that come from within our economies;
  - as well as the shocks that can hit them from without.
- And it's only by looking at both pressures and shocks together, and the Government's response to them, that we can fully understand the evolution of the public finances over successive generations.
- So it's for that reason we have brought together the long-term fiscal projections that used to appear in our *Fiscal sustainability reports* with analysis of the threats to the public finances that used to appear in our *Fiscal risks reports* into a single, annual *Fiscal risks and sustainability* report.

#### **4. Fiscal Risks and Sustainability 2022**

- Let me now turn to the content of this year's *FRS*.
- And let me start by thanking the staff of the OBR; Treasury and Whitehall colleagues; and experts from a wide range of fields for their help in putting this report together. However, as always, all judgements and analysis included in this report are our own.
- The report itself is divided into three main chapters:
  - the first looks at the fiscal risks associated with rising geopolitical tensions in the light of the Russian invasion of Ukraine;
  - the second looks at the risks associated with higher and more volatile energy prices in the aftermath of that invasion;
  - and the third looks at what changing demographic, economic, and environmental trends mean for the underlying pressures on the public finances over the next 50 years, including taking account of these potential risks along the way.

#### **5. The UK public finances in war and peace**

- Starting with rising geopolitical tensions, we first look at what the rapidly changing security landscape in Europe and the Pacific could imply for future levels of defence spending.
- Historically, wars have been the single largest source of fiscal risks in the UK.
- Indeed, as you can see from the yellow lines on this chart, up until the financial crisis, paying for wars was the only thing that led the Government to borrow more than 10 per cent of GDP in a given year over the past three centuries.
- Three protracted wars on the European continent, the Napoleonic, First, and Second World Wars, proved particularly expensive with each adding over 70 per cent of GDP to the stock of government debt, which, as a result, reached an all-time high of over 250 per cent of GDP in 1946.

#### **6. Defence and other spending since 1700**

- Even short of such periods of total war, heightened tensions among major powers have also been expensive – as was the case in the early years of the Cold War which kept defence spending from falling back to its historical peacetime level of low single digits of GDP.

- The gradual easing of Cold War tensions over the latter half of the 20<sup>th</sup> century has been a significant and rare source of fiscal savings for governments in the UK and around the world.
- The so-called 'peace dividend' reaped by successive Chancellors amounted to 8 per cent of GDP as defence spending fell from:
  - 10 per cent of GDP at the end of Korean War in the 1950s;
  - to 5½ per cent prior to UK's withdrawal from East of Suez during the 1960s;
  - to 4 per cent prior to the fall of the Berlin Wall during the 1980s;
  - to the roughly 2 per cent of GDP where it stands at today.
- As you can see from the blue area on this chart, this created fiscal space for the expansion of health, education, welfare, and other public spending over the post-war period.
- A key question hanging over the fiscal outlook in the wake of the Russian invasion of Ukraine is: what might it imply for future levels of defence spending and the resources available to meet other pressures and priorities?
- More than 15 other NATO members have already committed to increasing defence spending to meet or exceed the NATO benchmark of 2 per cent of GDP.
- Germany's commitment to spend an additional 100 billion Euros is the most significant in absolute terms and could, if fulfilled, see them overtake the UK as the second-largest defence spender in NATO after the US.

## 7. Defence spending scenarios

- In the context of what we now know about the Russian threat and the commitments from our NATO allies, we consider three scenarios for the path of defence spending in the UK over the next 15 years:
  - At the optimistic end of the spectrum, Russia's failure to secure a swift and decisive victory in Ukraine and recent commitments by our European allies to spend more could, in principle, reduce pressure on the UK and allow our defence spending to continue on its post-World War II downward trend to 1 per cent of GDP. While this would save the Government £27 billion in today's terms, the UK's commitment to the NATO 2 per cent target would seem to rule this option out of hand.

- Staying the second-largest absolute spender in NATO in light of the German commitment to spend 2 per cent of their larger GDP would require UK defence spending to rise to between 2.5 and 2.8 per cent of our GDP. In our second scenario, UK defence spending rises to 3 per cent of GDP by the mid-2030s which would comfortably meet this goal, but at a cost of an additional £24 billion in today's terms. The Prime Minister's statement at the NATO Summit in Madrid last week that defence spending would reach 2.5 per cent of GDP by 2030 would be consistent with that trajectory.
- Finally, were the Russian invasion of Ukraine and rising tensions in the Pacific to augur a more seismic shift in the geopolitical landscape requiring Cold War levels of resource mobilisation, then going back to the 4 per cent of GDP spent on defence during the 1980s would cost the UK an additional £49 billion a year.

## 8. Cyberattack scenario

- In addition to possible pressures on conventional defence spending, the UK also faces the new and growing threat of unconventional warfare in the form of cyberattacks.
- The UK was the third most targeted nation for cyberattacks last year after the United States and Ukraine.
- While most of these incidents have been relatively modest in scale, a few recent attacks have cost other economies billions and governments hundreds of millions.
- Drawing on a scenario developed by the Cambridge Centre for Risk Studies, we model the possible economic and fiscal consequences of a major cyberattack on the UK's energy grid.
- As you can see from the chart on the right, the attack reduces GDP by 1.6 per cent in the year that it happens and could add up to £29 billion to government borrowing.
- While significant, both of these are a fraction of the widespread and long-lasting disruption that we and other countries recently experienced as a result of the pandemic

## 9. Reversal of globalisation?

- On top of the potential fiscal costs of these growing *security* threats, rising geopolitical tensions could also put at risk the gains from global *economic* integration over the past 70 years.

- In fact, the pace of global economic integration has already stalled on some measures and reversed on others since the global financial crisis in 2008:
  - As you can see from the chart on the left, having grown rapidly in the early 2000s, global trade as a share of GDP peaked at 31 per cent in 2008 and has since fallen to 26 per cent in 2020.
  - As shown in the chart on the right, global foreign direct investment flows peaked in 2007 at 5 per cent of GDP and have since fallen back to 1.4 per cent in 2020.
- Having been historically one of the most open of the major economies, the fall in both trade intensity and inward FDI has been particularly pronounced in the UK in recent years.
- And US-China trade wars, post-pandemic efforts to shorten supply chains, and continued uncertainty concerning our trading relationship with the EU cloud both the global and UK outlook for cross-border trade and investment flows.

## 10. Global trade war scenario

- To estimate the potential economic and fiscal consequences of rising global protectionism, we look at what would happen if simmering trade tensions erupted into an all-out global trade war.
- This is modelled on a 2019 World Trade Organization scenario in which countries around the world put in place non-tariff barriers equivalent to a 26 percentage point increase in tariff rates. Knock-on effects on global capital movements also raise interest rates on government debt by 1 percentage point.
- The economic impact of rising protectionism on different countries is proportionate to their degrees of openness and market power – with overall trade volumes falling by 17 per cent.
- The UK suffers a 22 per cent fall in exports and its GDP ends up about 5 per cent lower due to the loss of both static and dynamic gains from trade.

## 11. Geopolitical stress test

- Reflecting the tendency for global security and economic tensions to rise in tandem, we conclude the chapter with a geopolitical stress test which combines rising defence spending, a cyberattack in the mid-2020s, and the trade war I just described.
- You can see from the chart on the right that this extreme scenario adds over 3 per cent of GDP to the deficit and over 25 per cent of GDP to debt by the mid-2030s – with the

largest contribution coming from the economic fragmentation resulting from greater protectionism.

## **12. Gas and oil prices: March 2022 forecast and latest**

- Moving onto the second main chapter of the report, another consequence of the Russian invasion of Ukraine was an increase in energy prices which had already begun to rise late last year on the back of surging demand following the lifting of lockdown restrictions in advanced economies.
- Our March forecast assumed gas prices would rise to £3 per therm and oil to \$100 per barrel this year, before falling some way back toward their pre-invasion levels.
- Since then, both oil and gas spot prices have remained highly volatile while futures prices have risen further.
- At the time we went to print in late June, markets were expecting gas and oil prices to peak at £3.20 per therm and \$110 per barrel respectively and remain somewhat higher than we had forecast over the medium term, as shown in the yellow lines on this chart.

## **13. Energy price scenarios**

- To illustrate the economic and fiscal risks associated with high and volatile energy prices, we look at two scenarios for gas and oil prices over the next five years.
- The first is a short sharp shock, shown in red, in which gas prices more than double to £7 per therm and oil prices rise to their 21<sup>st</sup> century high of \$147 per barrel before both fall back to the levels assumed in our March forecast by 2025.
- The second is a smaller but more persistent shock, shown in blue, in which gas prices stay at £3 per therm and oil prices rises to and then stay at \$147 per barrel for the next five years.

## **14. Energy price scenarios: economic impact**

- The temporary spike scenario pushes quarterly inflation into double digits next year before turning negative as energy prices fall.
- The resulting contraction in real incomes and consumption is sufficient to tip the economy into recession next year. GDP falls 4 per cent below our March forecast in the depths of that recession but then quickly recovers as prices fall – with no long-term scarring to economic activity.

- The permanent shock scenario sees inflation remain above our March forecast for longer, averaging 4 per cent higher in 2023-24 and not falling back to target until late 2025.
- Persistently high energy prices permanently raise economy-wide costs, which reduces the level of GDP by around 2 per cent over the medium term.

### **15. Energy price scenarios (temporary): fiscal impact**

- Turning to their fiscal implications, the temporary price spike adds £30 billion to government borrowing next year with a persistent effect on welfare spending due to the triple lock on state pensions and the fact that on existing policy settings other benefits cannot be adjusted downwards in response to deflation.
- Were the Government to extend a level of fiscal support in proportion to that provided for energy bills and the price of oil so far this year, it would add a further £40 billion to borrowing at its peak as shown in the dotted line and blocks on this chart.

### **16. Energy price scenarios (permanent): fiscal impact**

- The persistent price shock has a smaller peak fiscal impact with borrowing £17 billion higher next year.
- But it has a similar long-term fiscal impact, adding £50 billion to debt by the mid-2020s, reflecting the persistent scarring of GDP and non-North Sea tax receipts, and higher welfare spending.
- Were the Government to continue to subsidise energy bills in the same proportion as they have done so far this year, this would add a further £100 billion to debt after five years.
- However, in both scenarios, extending government support merely pushes the cost of higher energy prices onto future households, as the Government cannot make the costs of more expensive energy go away, but merely adjust who pays it and when.

### **17. Future energy mix: a policy trilemma**

- Looking out over the longer term, the UK has more flexibility to alter where it gets its energy from – both to reduce our dependence on volatile fossil fuels and to meet our ambition to reach net zero carbon emissions by the middle of the century.
- So the second half of the chapter looks at the challenge of changing the energy mix of the UK economy which, despite using two-thirds less energy per unit of GDP than it did at

time of the last energy crisis in late 1970s, still relies on fossil fuels for three-quarters of its energy.

- In looking to shift our energy mix away from fossil fuels, the UK faces a trade-off between three key objectives:
  - first, affordability – in terms of the cost of building, operating, and decommissioning energy infrastructure;
  - second, cleanliness – in terms of the volume of carbon emissions generated in the process of producing that energy;
  - and third, security – in terms of the potential for disruption in the supply of that energy as a result of geopolitical, meteorological, or seasonal factors.
- Measuring the UK's three main energy sources against these three objectives:
  - fossil fuels used to be relatively cheap, but are also the single-largest source of carbon emissions – and have become both more expensive and less secure following the Russian invasion of Ukraine;
  - nuclear energy is clean and reliable, but nuclear power plants have proven very expensive to build and even more expensive to decommission;
  - and finally, renewable energy of the kind available in the UK, namely wind and solar, is cheap and clean but also highly intermittent depending on the weather, time of day, and time of year.

## **18. Future energy mix: a fiscal trilemma**

- Resolving this trilemma could clearly involve some fiscal costs – especially given the greater focus on security alongside net zero prompted by the geopolitical situation:
  - If we were to retain some significant share of fossil fuels in our energy mix, there could be greater pressure on the Government to make it consistent with our net zero commitments by subsidising some of the £16 to 22 billion cost of adding carbon capture and storage technology to the next generation of gas-fired power plants.
  - If we're to meet the Government's ambition to build an additional 18 gigawatts of nuclear power generation capacity, the Government could come under pressure to pick up some of the huge construction costs – which the latest estimates for Hinkley Point C suggest could be of the order of £170 billion.

- Finally, solving the intermittency problem of wind and solar energy could see the Government coming under pressure to meet some of the up to £20 billion cost of storing energy overnight and between seasons.

## 19. Fiscal costs of net zero: an update

- Meeting these costs has probably also become harder since we produced our initial estimates of the fiscal implications of getting to net zero a year ago, and for two main reasons.
- First, higher oil prices are likely to accelerate the transition away from petrol-driven cars, new sales of which are already banned from the 2030s onwards. This will ultimately eliminate the roughly 1.5 per cent of GDP in annual revenue the Government currently receives from motoring taxes in the form of fuel and vehicle excise duty.
- Second, while higher gas prices have increased the incentive for firms and households to switch to low-carbon alternatives, in doing so they have reduced the scope for the Government to create those incentives itself through an extended emissions trading scheme or other carbon taxes:
  - plugging the latest gas prices into our analysis from last year's *Fiscal risks report* reduces the total potential carbon tax yield by around a sixth – or just under 3 per cent of GDP – over the course of the transition;
  - instead, those revenues are going to *current* producers of fossil fuels – be they friend or foe.
- In conclusion, while governments have more options for reducing the UK's economic dependence on fossil fuels over the longer term, each of those options comes with a potential fiscal price tag. And the scope for meeting those costs through higher revenue is diminishing as fuel prices rises and fuel use falls.

## 20. Long-term fiscal projections

- These emergent geopolitical and energy risks, and all of those analysed in our previous risk reports, need to be managed in the context of a set of longer-term demographic, environmental, and structural pressures on the public finances.
- And so the third and final chapter of the report provides an updated set of 50-year projections of the public finances out to the early 2070s.
- This is our first full update to these long-term projections since 2018.

- These new projections take account of the following significant changes in the interim:
  - first, a more favourable starting primary balance – thanks in part to the tax increases introduced by the previous Chancellor in the wake of the pandemic;
  - second, updated demographic assumptions based on the interim population projections which were published by the ONS in January;
  - third, the loss of motoring taxes I described earlier as petrol-driven vehicles are phased out;
  - fourth, other economic impacts including the offsetting effects of the Government’s significant increase in public investment and the costs of getting to net zero on the long-run level of productivity;
  - and finally, other policy changes including the additional costs of the Government’s adult social care reforms and the modest savings from reforming the student loans system.

## 21. Latest demographic assumptions

- Looking in more detail at the *demographic* assumptions, our projections incorporate the following three changes relative to our 2018 *Fiscal sustainability report*:
  - first, a lower birth rate which has been revised down from 1.84 to 1.59, reflecting a drop in births that largely pre-dates the pandemic. As you can see from the chart on the left, this contributes to a material downward revision in the young-age dependency ratio from around 30 to around 25 per cent;
  - second, lower net migration consistent with the new post-Brexit migration regime which contributes to a reduction in average net inflows from 165,000 to 129,000 per year;
  - and third, slower improvements in life expectancy, with the average life expectancy for a woman born in the mid-2040s revised down from 95.6 to 92.6 years.
- As you can see from the chart on the right, taken together these three changes slightly reduce the old age dependency ratio until the mid-2040s.
- But after that, the effect of fewer births and lower net migration on the working-age population *increases* the ratio from 30 per cent today to over 50 per cent by the early 2070s.

## 22. Population and age structure

- Taken together, these three changes reduce the average growth in the overall population from 0.3 per cent in our 2018 FSR to *minus* 0.1 per cent in our latest projections.
- As you can see from the chart on the left, this is the first time our projections have been based on a declining population – which rises from 67.1 million in 2020, peaks at 68.4 million in 2044, before falling back to 65.9 million in 2072.
- But what matters more for fiscal sustainability is not the size, but the age structure, of the population.
- And as you can see from the chart on the right, as a result of the demographic trends I mentioned earlier, the share of those under the age of 15 shrinks from 19 to 14 per cent between 2022 and 2072, while the share aged 65 and over rises from 19 to 29 per cent over that period.

## 23. Primary spending and receipts

- This chart summarises what these various changes imply for the evolution of tax and primary spending over the next 50 years.
- As you can see, receipts decline slightly as a share of GDP due almost entirely to the loss of motoring taxes as the vehicle fleet electrifies.
- The falling birth rate reduces spending on education by just under 1 per cent of GDP – a very large proportionate decline.
- And the overall ageing of the population – combined with significant non-demographic cost pressures – pushes up spending on health by 7 per cent, adult social care by 1 per cent, and pensions by 3 per cent of GDP.

## 24. Primary deficit over 50 years

- Looking at what that implies for the path of the fiscal balance, a more favourable starting point coupled with lower spending on education and welfare in the near term sees the primary deficit fall below our 2018 projections until the mid-2050s.
- But the steady ageing of the population creates a growing gap between receipts and primary spending thereafter which rises to 11 per cent of GDP by the end of the projection period.

- As you can see from the breakdown on the right, this is 2.6 per cent of GDP worse at the 50-year point than in our 2018 projections due to the net effect of three main things:
  - first, a slightly better fiscal starting point which takes 0.7 per cent of GDP off the deficit;
  - second, the combination of lower birth rates, lower migration, and higher mortality which add 1.1 per cent of GDP to the deficit;
  - and third, the loss of motoring taxes which add *another* 1.6 per cent of GDP to the deficit.

## 25. Public debt over 50 years

- The lower path for primary spending in the near term sees debt fall to 70 per cent of GDP by the early 2040s.
- But after that, the growing primary deficit and rising interest burden put debt onto an exponentially rising path which reaches 267 per cent of GDP by the early 2070s.

## 26. Public debt over 50 years with shocks

- Of course, coming back to the point that I made at the start of this presentation, our baseline projection for debt assumes that nothing else goes wrong over the next 50 years.
- But if the past two decades has taught us anything, it's that things can and will go wrong – and that when they do, they can have significant and lasting effects on the public finances.
- So this final chart overlays several potential shocks to public debt along the way to the 2070s.
- Factoring in a stylised estimate of the average fiscal cost of recessions, which occur roughly once a decade and add roughly 10 per cent of GDP to the stock of government liabilities, would push debt above 320 per cent of GDP by the end of the projection period as shown in the dotted green line.
- Factoring in the two energy price shock scenarios raises the final debt stock to around 300 per cent of GDP.
- And the geopolitical stress test, combining higher defence spending, a one-off but major cyberattack, higher global interest rates, and a permanent rise in global protectionism

pushes debt above 400 per cent of GDP, due primarily to the impact of rising trade barriers on UK productivity.

## **27. Conclusion**

- In conclusion, this analysis of the risks and pressures on the public finances is based on a series of “What ifs”.
- Some are very likely to come to pass – the ageing of the population is pretty certain; the need to reduce carbon emissions is widely accepted; and the take-up electric vehicles is accelerating.
- Some risks are more uncertain – energy prices could fall back rather than staying high if geopolitical tensions ease; and the process of global economic integration could be revived.
- And some threats are as yet largely unknown – as Covid was three years ago.
- But the lesson from the twenty years since the UK produced its first long-term public finances report is that all of these risks need to be understood and mitigated if we are to safeguard fiscal sustainability in what appears to be an increasingly risky world.
- And we hope that this and future reports provide governments with the analysis they need to anticipate some of these risks, and Parliament and the public with means to hold them to account for their management.
- And with that, I’ll now hand things over to Laura who will be chairing the question and answer session.