Witness Name: James Benford

Statement No: 1

Module: 9

Exhibits: JB/001 - JB/044

Dated: 3 October 2025

THE UK COVID-19 INQUIRY

WITNESS STATEMENT OF

JAMES BENFORD

I, JAMES BENFORD, will say as follows: -

1. I make this statement pursuant to a Rule 9 request from the UK Covid-19 Inquiry dated 4 July 2025 in relation to Module 9: Economic Response.

2. This witness statement has been drafted with the assistance of the Government Legal Department.

3. In line with the Rule 9 request, I have focused on the work I engaged in as part of the UK Government's economic response to the pandemic, for the period between November 2020 and July 2022. During this period, as explained below, I was Director of HM Treasury's Economics Group.

4. The Inquiry's Rule 9 request is wide-ranging and significant time has elapsed since I took up my position as Director of Economics Group in November 2020. I no longer work at HM Treasury and have not done so since February

2023. I have been directed towards documents and correspondence relevant to the Inquiry's Terms of Reference and the matters I have been asked to address. Whilst I have some recollection of the issues referred to, due to time elapsed it has not been possible to independently recall all relevant details, and I have therefore also taken account of information supplied by His Majesty's Treasury ("**HM Treasury**"). Despite this, any views expressed in this statement are wholly my own. It has not been possible to read all available records, due to the large volume of material and my move from HM Treasury to the Bank of England ("**BoE**) in March 2023 and then from the Bank of England to the Office for National Statistics in August 2025. Should it assist the Inquiry I would be happy to clarify or expand on any aspect of my evidence as set out in this statement.

Part A: Overview of Role at HM Treasury

5. I am currently a Director General for the Surveys and Economic and Social Statistics at the Office of National Statistics, having started in the role on 4 August 2025.

6. Prior to this I was Executive Director for Data and Analytics Transformation and Chief Data Officer at the BoE from March 2023 until July 2025. I was responsible for the BoE collection of statistics and regulatory data and for a Bank-wide transformation agenda to enable the Bank to make the best possible use of data across all its functions, including the application of artificial intelligence and through effective analytical processes that continuously improve.

7. During the relevant period I was the Principle Private Secretary to the Governor of the BoE from January 2020 to May 2020. During this period I also had working relationship with the Chancellor's office.

8. I was then seconded to the Civil Service, first as Director for Analysis at the Joint Biosecurity Centre from June 2020 to November 2020 and then as

Director of the Economics Group and Departmental Head of Profession for Analysis at HM Treasury, where I also established HM Treasury's data science hub. I was in this role from November 2020 to February 2023. I had three months parental leave from November 2021 to January 2022.

9. During my time at the Joint Biosecurity Centre, I had a working relationship with the Secretary of State for Health, through briefings on the spread of Covid-19 around the United Kingdom, and also with the Home Secretary, through briefings on the spread of Covid-19 overseas, which informed arrangements at the UK border.

10. I had a good working relationship and clear lines of communication with the Chancellor and his advisors whilst at the Governor's Office. This facilitated a coherent macroeconomic response to the pandemic. This working relationship assisted me in the transition into my Director role at HM Treasury.

11. During the relevant period, as Director of the Economics Group at HM Treasury. I worked closely with, and reported to, senior officials within HM Treasury and colleagues across the department who had an interest in and were consumers of the macroeconomic assessment and analysis work produced by the Economics Group.

12. I also engaged with parties external to government who also produced analysis and assessment of the impacts on the UK macro economy. This included the Cabinet Office, which convened a weekly group on analysis of Covid-19 including its effects on public health and the economy, as well as the Bank of England and the Office of National Statistics.

Part B: The Economics Group

13. As stated above, I held the position of Director for Economics Group at HM Treasury from November 2020 for the remainder of the relevant period. My core responsibilities in this role in respect of the pandemic were:

a. To oversee the Economics Group, in providing ongoing analysis and assessment to the Chancellor and senior HM Treasury officials on the UK's macroeconomic performance, the outlook and key risks. During the pandemic, this work specifically focused on assessing the macroeconomic impacts of the virus and of the measures and restrictions put in place by the government to manage it i.e. the Non-Pharmaceutical Interventions ("**NPIs**") which affected economic activity;

b. To work collaboratively with colleagues across HM Treasury, Whitehall and beyond, both to support a shared analysis and assessment of key macroeconomic issues, and to ensure Economics Group analysis and assessment is well communicated and understood. This included driving strong cross-group join-up and collaboration within HM Treasury; strong engagement with analytical colleagues across the Government Economic Service (GES) and Director of Analysis (DDAN) networks, as well as with the Bank of England and OBR; and with externals including UK think-tanks, commentators and academics, and with international bodies such as The Organisation for Economic Development ('OECD') and the International Monetary Fund ('IMF'); and

c. To chair the Economic Risks Group, working closely with colleagues in the Financial Stability Group, to consider macro-economic and macro-prudential risks to the UK economy, ensuring those risks are well understood and communicated (including as part of quarterly risk reporting to EMB), are well joined up with other risk groups (including the Fiscal Risks Group and Operational Risks Group), that analysis of those risks can be challenged and peer reviewed, and that analytical work plans are shaped on the basis of that risk analysis.

14. The main functions aims and objectives of the Economics Group were to provide policy teams, analysis, assessment and advice on macroeconomic

developments in the UK economy, inform policy development and support the department's macroeconomic objectives.

15. The Economics Group provides ministers with analysis and assessment of macroeconomic developments in the UK economy and advises on their implications for the government's economic strategy. It works with policy teams to factor economic analysis into advice for ministers on a wide range of polices. The group is a leading member of the UK macroeconomic community, collaborating with the BoE, the Office for Budget Responsibility ("**OBR**") and academia on shared topics of interest. They also liaise with international organisations in their surveillance of the UK economy and support the economic and social research professions across government departments.

16. Macroeconomics looks at the economy as a whole for example, GDP (i.e. how much is the country producing), the labour market (how many people are employed and how much they are paid), interest rates (i.e. how much does it cost to borrow money) or rising prices (inflation). It includes broader analysis of the cost of living and the availability of credit. Governments and companies draw macroeconomics to develop policies and as context for long-term strategic decisions.

17. During the relevant period the Economics Group provided analysis and assessment of the impacts of the pandemic on the UK macroeconomy, and the measures taken to manage it. That analysis and assessment was provided to the Chancellor and colleagues across HM Treasury who were responsible for policy development of the economic response to the pandemic. It also fed into cross-government products and governance processes, including the government's central Covid response processes led by Cabinet Office and No.10 as outlined in paragraph 31 below. The Economics Group also shared its analysis with the Office of Budgetary Responsibility and the BoE to inform their forecasts of the economy.

18. The functions of the Economics Group were primarily analytical and although this work informed policy making, the Economics Group did not have a role in developing the economic policy response to the pandemic and I had no policy making responsibilities regarding the government's economic response to the pandemic.

19. The Economics Group works alongside other groups and teams in HM Treasury that also undertake economic analysis on specific issues such as business and sectoral impacts, the labour market, and distributional impacts. In this regard, it is important to note that during the relevant period, not all analysis and modelling capability in HM Treasury took place in the Economics Group that I was responsible for, although that is where the analysis and modelling on macroeconomic issues was mainly placed. Analysts also sat across a wide range of groups around the department and carried out work on the impacts of the pandemic and measures taken to manage it relevant to their respective mandates. Together these groups continuously assessed the UK economy, covering both the near-term outlook and cyclical or structural trends that might be pertinent to macroeconomic strategy and fiscal policy making. This flow of analysis from across the HM Treasury groups is used to provide continuous updates and advice to the Chancellor and ministers and to inform policy development on a wide range of issues. It is also used to inform and advise the Chancellor on major fiscal events, such as Budgets, Autumn Statements and Spending Reviews. As outlined within this statement, this flow of analysis continued throughout the relevant period.

20. During the relevant period, the analysis from these HM Treasury groups was regularly bought together by the Covid-19 Response Team which was responsible for coordinating pandemic related work across the Treasury.

Part C: Head of Profession for Analysis

21. Heads of Profession are responsible for representing the interests of analysts from one particular profession within their department on a range of issues. The role of Head of Profession is also to lead and champion analysis within

departments. Heads of Profession act as ambassadors for their particular profession, in addition to promoting the role of analysis to improve outcomes for the UK. They also ensure analytical work follows the profession-specific guidance that makes up the Functional Standard of Analysis. It is worth noting for the benefit of the Inquiry that the way in which sign off for analytical work within HM Treasury operated was slightly different to some other government departments. Whilst most analytical work was concentrated within the Economics Group, which I was responsible for, some analytical work was also dispersed and taking place elsewhere. I oversaw a senior analytical leadership team which in turn oversaw general standards, however there were embedded analysts in most other groups within the department and there were many Policy Profession colleagues who also performed analytical work. As such I was not in practice responsible for signing off every piece of analytical work that was produced by the department. That responsibility might instead be delegated to management teams overseeing the group where that piece of analysis took place.

22. All analysts within the department have the right to contact the Head of Profession at any time if they feel that work being produced by the Department does not appropriately incorporate technical advice. During my time, I do not recall that specific concerns being raised with me, though I did have regular contact across the Department with many analysts to help them with their work and support them in how they deployed it. The Head of Profession is responsible for taking any necessary action at an appropriately senior level. Further detail on the range of responsibilities held by a Head of Profession is in the public domain and published on the Government Analysis Function website.

Data

23. Economic modelling during the pandemic was significantly more challenging than in normal times as the nature of the virus and the restrictions being implemented to combat it were without precedent, evolving simultaneously and at great speed. A significant challenge was the timeliness of data. A clear and comprehensive picture of what is happening in the economy is only

possible following a lag or delay, due to the time taken to collect and process these data sources. For example, the earliest official GDP data is published 45 days after the end of each month. It is only with greater delay that further breakdowns, for example by expenditure and at a regional level become available. A lack of real-time data meant that it took some time to understand the impact of the virus and restrictions on the economy, particularly during the early phases of the pandemic. As time passed and more data became available, the impact of different restrictions became clearer, and our understanding of their impacts built up. It later became apparent that the economy better adapted to a given restriction as time went on, such that more activity was able to take place. Again, it was only with the passage of time as more and better data was received that we were able to learn of the size of these effects and incorporate them into our analysis.

24. HM Treasury leveraged new sources of data, for example from the private sector to assess economic activity. OpenTable provided daily restaurant booking trends, and Google daily mobility data provided data on transport and economic activity [JB/001/INQ000656087]. We were able to estimate a relationship between this google mobility data and GDP which enhanced our overall ability to trace the impact of restrictions.

25. Regional data was also useful in deepening the department's understanding of incidence and the impact of restrictions, as these often varied in nuanced ways across regions within the UK. As discussed above we also used Google mobility indicators as a proxy for economic activity. Alongside the frequency of data produced, an advantage of the Google mobility indicator is that it was available at a regional level. By linking regional variations in mobility with regional variations in the severity of restrictions on activity that followed from a local approach to lockdowns, it was possible to draw some inferences on the impacts of different types of restrictions more quickly than would have otherwise been possible. HM Treasury shared this analysis with various stakeholders through the winter of 2020/2021 and published it in the Spring budget of 2021.

26. I do not recall an inability to link different datasets being a significant barrier to departmental understanding through the acute early phases of the pandemic. Micro-datasets, which can be linked, are typically only available with a long lag time, so these weren't being used in a significant way in the early pandemic as a means of understanding impacts. We did however use various cuts of historic linked datasets to map out which specific groups would be most affected by falls in activity in different sectors (both by regions and different characteristics such as gender and ethnicity). As time went on and we moved to the recovery phase of the pandemic, understanding what was holding back labour supply was one important area where having more linked datasets would have been helpful. I return to this point below.

27. In general, improving data flows to allow for the development of more complete real time indicators would bolster the overall data infrastructure in the UK Government such that it would be more readily prepared to respond at pace to a crisis akin to the pandemic. For example, following the Bean Review, estimates of GDP were published on a monthly basis, and this was critical for understanding the rapid changes in the economy that occurred through the pandemic. In general, broadening the data sources that underpin official statistics, to complement surveys with alternative private sector and administrative estimates can both improve the quality of the initial estimates of the economy and may over time create a path to improving the timeliness with which those estimates can be reliably arrived at. With respect to official statistics and preparing for a future crisis, there is an important role for the Office for National Statistics to play in articulating its strategy for improving the quality of its outputs, including those relating to the sourcing of data from private sector and administrative sources. Clarity on the priorities for incorporating administrative sources into official statistics can then usefully guide investments in data sharing and the broader national data strategy.

28. In addition, linking micro-data data sets, for example, employment, health and benefit systems data can help both to identify the factors holding back labour supply and to better evaluate the impact of public policy interventions which are designed to ameliorate those factors.

29. To take economic inactivity as an example, I recall that as we exited the pandemic, we struggled to understand why people had both stopped working and were not looking for work. With access to more linked or linkable data, for example, across employment records, health records and benefits system records, we may have been able to solve this puzzle with much more precision and foresight. I do recall that some discussions with ONS and DHSC were initiated with a view to making this happen in early 2023, before I left HM Treasury. Over time this has resulted in linked-data sets being brought together, which are a valuable resource. One reflection here is that it is difficult, time consuming and costly to bring together and maintain linked-data sets, both due to the time taken to put together the necessary legal and data sharing agreements and due to the work needed to compile and piece together the data. There are, especially with individual data, risks that need to be very carefully managed, particularly when highly sensitive data is involved. In light of that it is critically important that the approach to bringing together linked data is both strategic and tightly prioritised around clear use cases and set up as a collaboration between those who benefit from those use cases with those providing the data and infrastructure.

30. Strategic priorities for data linking, guided by clearly articulated use cases and strong sponsorship for those use cases, are also an important area for consideration with the national data strategy and library. In my current role at the Office for National Statistics, one pressing strategic priority is linking data to improve the quality of official statistics for the labour market.

31. The overall responsibility for the Covid-19 Dashboard did not sit with the Economics Group. The Covid-19 Dashboard was a central dashboard created by the Cabinet Office providing the whole of government with a central source of information relating to the pandemic. It was very broad and the set of data and analytical feeds expanded over time, as useful sources of data and analysis were identified by the Cabinet Office. The Economics Group fed some data to the Cabinet Office via the Covid Response Team for inclusion in the Covid-19 Dashboard.

32. I have been asked a series of questions about the Economic Dashboard. With the understanding that this refers to the Dashboard produced to support economy update meetings for the Prime Minister which were jointly run by HM Treasury and the CO, I have provided the below details.

33. The Economic Dashboard was put together to support these meetings between the Economics Group in conjunction with the Cabinet Office. Its function was to bring important and up to date economic data together into the one place on the themes that were most relevant at the time, including monitoring the economic impact of the pandemic. Its frequency and areas of focus changed over time, reflecting the size and nature of developments in the economy. The content of the dashboard was tailored to support the agenda that was agreed with the Prime Minister's Office.

34. During economy update meetings (the frequency of which changed through the pandemic) [JB/002/INQ000184623, JB/003/INQ000184625] JB/004/INQ000184630, JB/005/INQ000184635] my role was to present and oversee the production of slide decks containing the latest picture of the UK economy for the Prime Minister and Chancellor.

35. The function of these meetings was predominantly to brief the Prime Minister on the state of the economy and discuss key economic issues and risks. The meetings were attended by the PM and his office, as well as by the Chancellor and HM Treasury officials. The agenda of each meeting was set by the Prime Minister's Office and coordinated by EDS. The Prime Minister's Office was responsible for minuting the meeting. The focus of the meeting was on developments in the economy, rather than to formulate economic policies.

36. I have been asked what steps have been taken since the pandemic to improve access to and quality of data since the pandemic and for recommendations I might make in this regard. HM Treasury was already

taking steps to improve its data science capabilities during the pandemic, some of which I have detailed below. I would also refer to my above answer at paragraph 29 and 30 above.

Analysis

37. In December 2020, the Economics Group consisted of 94.2 FTE, with most staff focusing on analytical work. This number would not have represented all analysts in HM Treasury as many would have been embedded into teams throughout the Department.

38. I have been asked to provide a summary of HM Treasury's employment of data scientists on 31 December 2019 and how their expertise was deployed during the pandemic period.

39. As I did not take up post until November 2020, I can only provide limited insight in this respect. When I started in my role, I was impressed by some aspects of HM Treasury's data science capabilities. There was a functioning data platform on the cloud and a coding community already established. This created a good foundation to increase and improve the use of data science in the department's work. What was lacking however was a clear strategy to do so and a team to drive it forward.

40. During my tenure, HM Treasury significantly expanded its data science capabilities. Once I took up post, Clare Lombardelli initiated a review of HM Treasury's data science capabilities, which was led by a Deputy Director. HM Treasury was aware of advancements in data science capabilities and the review's purpose was to investigate ways to include these advancements in its work, building on existing capabilities [JB/006/INQ000656088]. As a result of the review, I was tasked with the setting up of a data science hub and the appointment of the department's first Chief Data Officer. During my time in the role, budget resource was limited, as the department and the Economics Group was shrinking, but we were able to stand up an initial minimum viable version of the hub that in time grew to around 12 people. We drew on a

cloud-hosted data platform that had already been set up when I joined HM Treasury and sought to bring that technology to bear against a first set of use cases. This included creating a set of automated data and analytical feeds to allow analysts across HM Treasury to more efficiently and effectively produce routine outputs. The hub also engaged widely across HM Treasury to meet the needs of the Policy Profession, which led to the development of a number of tools that facilitated the more effective management of correspondence and searching of knowledge bases. The hub also enhanced the management of information within the department and supported the development of an award-winning dashboard, focused on monitoring and understanding trends towards the department's diversity and inclusion objectives. The hub was an important enabler of efficiency savings, both by freeing up time taken by automating routine tasks and through economising the data acquisition and sharing within HM Treasury. It also enhanced analytical capabilities. As an example, data science techniques were used to explore the impact of social distancing restrictions at the local level. This was subsequently published as part of the 2021 Spring Budget.

41. Overall, I found HM Treasury to be highly experienced and readily capable of carrying out analysis on the economic outlook, of ascertaining how shocks might affect the economy, and assessing the impact of policy decisions taken by government. This expertise is underpinned by the ability of officials within the department to use of a range of analytical techniques, such as modelling.

42. With respect to the Economics Group in HM Treasury, as was the case in most departments during the pandemic, everyone was working at full capacity. There are natural and inherent constraints on the public sector, and the department did its best to make best use of existing resources as well as to repurpose resource where possible. We ensured the pace of work was as sustainable as it could be by putting focus throughout on people, including their wellbeing and learning and development opportunities. I was in general very impressed by how talented, dedicated and flexible the people who worked at HM Treasury were during rapidly changing and uncertain circumstances. I found it important to develop strong links with other

government departments and bodies such as the OBR and BoE who brought different perspectives to bear on similar areas of analysis. These links allowed HM Treasury access to additional analytical capabilities and capacity.

43. Whilst resource within HM Treasury was naturally centred predominantly around economic, rather than epidemiolocal expertise, the department used this knowledge to provide the necessary colour to compliment knowledge being put forward by the scientific community. These perspectives worked in concert together to produce the overall economic response, which naturally had to take into account various risk factors. HM Treasury had amongst its staff who had been trained to PHD-level in economics and epidemiology. In many respects, particularly in relation to the detail of the supply side impact of government policy and the micro detail of the impact of specific interventions, including impacts regionally and on different groups, the capabilities at HM Treasury were impressively strong reflected at all times by the particular needs of the department.

44. Officials across HM Treasury used this expertise to extensively interrogate incoming data and communicate its implications to ministers using the various structures and processes developed by the department to do so effectively and at pace. HM Treasury officials considered the impacts that trends across various data sources were likely to produce, how these impacts might interact with policy decisions, and the overall outcomes for the economy, even taking into account nuanced impacts on specific sectors, households and firms.

45. During the pandemic, the scale of this work and the extent of collaboration across departments, naturally expanded with information sharing increasing over time as more relevant data became available and the base of analytical work increased. Given the multifaceted nature of the pandemic, the role of the Cabinet Office in coordinating the government response became increasingly important. To assist the Cabinet Office in this role, HM Treasury seconded policy and economist officials to provide further expertise and to assist them with interrogating economic inputs into decision-making, as well

as to provide further strategic capabilities. This included seconding officials to the Civil Contingencies Secretariat, which was coordinating the government's overall response to the pandemic, to ensure that the latest economic data was being communicated to ministers across government and incorporated into the central effort.

46. Senior officials routinely attended meetings with the Cabinet Office to draw together information on the path and progress of the virus as well as the impact of restrictions and behavioural changes on the economy. For example, there was a standing weekly bilateral meeting which switched to a daily rhythm in advance of major announcements taking place at senior and working levels [JB/007/INQ000088050]. This was in addition to frequent ad hoc consultation, and a range of official level meetings in support of Covid(O)s and Small Ministerial Groups ("SMGs")

47. HM Treasury works closely with other departments delivering parts of the government's overarching economic strategy, as well as with all government departments to ensure that spending plans supported high quality public services and value for money for the taxpayer.

48. HM Treasury officials routinely worked with other government departments, for example, with the Department for Transport ("DfT"), Department for Education ("DfE"), Department for Work and Pension ("DWP") and BEIS, for example, synthesising the latest data available across government into regular ministerial products shared with the Chancellor [JB/008/INQ000184619, JB/009/INQ000184624, JB/010/INQ000184627, JB/011/INQ000184631]. HM Treasury also engaged with cross-government assessments coordinated by Cabinet Office, including the May 2020 and February 2021 "Roadmaps" [JB/012/INQ000181691, JB/013/INQ000089798], as well as the November 2020 Covid-19 Winter Plan [JB/014/INQ000137262] and the Autumn and Winter Plan 2021 [JB/015/INQ000137065].

49. HM Treasury also leveraged where possible the expertise of the analytical community across government to inform and strengthen its assessment of the

economic outlook as well as to ensure Cabinet Office colleagues were able to draw on the latest economic analysis when synthesising information. For example, HM Treasury officials were an integral part of the Heads of Analysis group which I attended personally and was set up November 2020. This group, chaired by the Covid 19 Taskforce and containing representatives from the JBC, DHSC, ONS and Government Office for Science, met on a weekly basis to align the analytical efforts across government and produce integrated analysis. This analysis took into account a number of factors, such as the health, economic and social impacts of the virus and interventions [JB/016/INQ000236549, JB/017/INQ000236550].

50. HM Treasury relied on extensive joint working with other departments when it came designing relevant schemes. Analytical and policy teams in HM Treasury gathered real-time indicators and quantitative data from departments like BEIS, DWP and HMRC – as well as acquiring more qualitative input and views – which was then integrated it into advice to ministers. Similarly, HM Treasury data was shared to help inform the thinking in other departments (e.g., via the Cabinet Office Dashboard which we fed into). HM Treasury officials also joined economic statistics user groups convened by ONS and utilised existing relationships with BoE analysts at working level to share expertise and exchange views on data sources.

51. SAGE exists to provide scientific and technical advice to support government decision-makers during emergencies. During the pandemic, SAGE's sub-groups, including SPI-M, SPI-B, JBC and NERVTAG assisted in explaining public health data and producing some associated modelling. This was achieved by drawing on expertise which does not exist extensively within government, with SAGE meetings attended by experts from across the scientific spectrum, including those within academia and industry. HM Treasury officials used the information shared at these meetings in order to inform advice to ministers, as discussed in more detail below.

52. As a representative of HM Treasury, I also participated in a weekly group meeting of analysts, convened by the Cabinet Office in Autumn 2020 and drawn from across government departments. I found that group invaluable for bringing different perspectives, for example on the economy, on health, on education and official statistics, to bear on the most important analytical questions of the day. As well as bringing these different perspectives together the group was an important source of peer review and challenge. The group was instrumental in bringing together a common base of analysis to support both specific decisions and more general strategic publications such as the 'Roadmap' document produced in Spring 2021. Participation in this group allowed also for this same base of analysis to feed into decisions on economic and fiscal strategy, including at fiscal events. I recall this being important, for example, for the Spring budget in 2021.

53. During my tenure as Director Economics group, I made sure that the relevant pieces of analysis the group had produced, or had access to through connections across government departments, were shared with the OBR so they were able take this into account in their work on forecasting and scenario building. Again, this sharing of analysis improved the quality of analytical insights within HM Treasury through additional peer challenge and review. The various scenarios and forecasts produced by the OBR were in turn important for decision-making within HM Treasury, which routinely used modelling produced by other institutions to inform its advice to ministers.

54. We also engaged outside academics. For example, not long after I started in November 2020, HM Treasury invited academics from Universities in Cambridge, Chicago and Birmingham to discuss advances in epi-macro modelling and its possible application to policy analysis. The objective of the session was to focus more closely on modelling approaches and take stock of the latest technical thinking after the rapid increase in epi-macro research since spring 2020. Experts outlined key insights from the epi-macro modelling framework, including that voluntary social distancing, like non-pharmaceutical interventions, could slow virus transmissions but would also reduce economic activity. The discussion also highlighted the role of uncertainty in the balance

between health and economic outcomes. This engagement contributed to the work of the directorate by shaping how we developed and deployed our own epi-macro modelling.

55. Internationally, HM Treasury also engaged with various organisations, for example, the OECD and IMF. For example, the IMF developed modelling estimates that compared the relative impact of the virus and NPIs on economic activity. The OECD conducted extensive work on governments' policy responses to Covid, including a report which evaluated the impact of Covid containment measures on activity and spending [JB/018/INQ000226503], and HM Treasury officials closely monitored OECD's Economic Outlook and engaged with OECD staff regarding the Economic Survey [JB/019/INQ000236537].

56. Ultimately it is for ministers to determine what information and analysis is shared outside of the department and as such the extent to which external support could be engaged. I do not in general recall feeling restricted in my ability to do my job, including collaborating externally, by the constraints imposed.

57. I cannot recall specific examples however, in general there were instances where the department was limited in what it could share with other government departments or external bodies due to the sensitivities of policy under consideration. Much of HM Treasury's analysis accompanying fiscal events is highly market sensitive, and there were occasions where we needed to limit the set of people who were party to it both within HM Treasury and beyond it to those who needed to know to develop the specific policies under consideration. This was not however a barrier to the sharing of information with the Office for Budgetary Responsibility who had a formal role in the assessment of policies with significant economic effects. I expand on this below. On occasions, there were also some bandwidth constraints on the ability to engage externally at points, due to the rapid pace of policy development and re-prioritisation. When asked to do so by my external counterparts I made every effort to be open and share the information that I

could, as appropriate given an sensitivities, however I did not have visibility of every request for information coming into the department and how that was taken forward if it did not involve me. In the course of finalising an IfG report on HM Treasury's performance during the pandemic it was relayed to me that the various people who the IfG had spoken to as part of the review were universally positive – about both my technical skills and my openness to sharing my thinking and analysis.

58. The OBR is the government's official independent economic and fiscal forecaster. As set out in the Budget Responsibility and National Audit Act 2011, the OBR must, on at least two occasions for each financial year, prepare economic and fiscal forecasts. The OBR's forecasts are essential inputs to the government's ongoing policymaking. In order to facilitate the production of the economic forecast, the OBR uses a large-scale macroeconomic model. The model was originally designed and developed by HM Treasury but is now jointly maintained and developed by HM Treasury and the OBR.

59. As is standard practice, HM Treasury officials routinely engaged with the OBR, to share ideas and test thinking. Open discussion took place between the department and the OBR, with the latter offering its expertise and views on the outlook for the economy beyond what it normally would do (i.e. supporting HM Treasury in the run up to a fiscal event). The department supported the OBR in engaging with wider government, by sharing official-level analysis with the OBR to support their forecasting process. The OBR published various scenarios in order to guide decision-making and HM Treasury routinely used modelling produced by other institutions to inform advice to ministers.

The Bank of England

60. The BoE publishes a quarterly Monetary Policy Report that sets out the economic analysis and inflation projections that the Monetary Policy Committee uses to make its interest rate decisions. The Chief Economic

Advisor sits on the Monetary Policy Committee as the non-voting HM Treasury representative, HM Treasury has a number of ways that it interacts with the BoE, including as a sole shareholder of the Bank and as a departmental sponsor. Both HM Treasury and the BoE have a responsibility to share information with each other, particularly on financial crisis management, for which the BoE has primary operational responsibility.

61. During the pandemic, HM Treasury also discussed economic analysis widely with the BoE. To inform government decision making, HM Treasury brought together economic data published by the ONS, the forecasts and projections prepared by the OBR, the BoE and others [JB/020/INQ000226505]. Like SAGE, both the OBR and the BoE routinely engage with experts from outside of government, such as academics, to inform the delivery of its responsibilities.

Official level analysis undertaken within HM Treasury or other departments

62. HM Treasury engaged widely with other departments to leverage expertise from across government and make best use of the available data. This included the cross-government assessments coordinated by Cabinet Office, including the February 2021 "Roadmaps" [JB/012/INQ000181691, JB/013/INQ000089798], as well as the November 2020 Covid-19 Winter Plan [JB/014/INQ000137262] and the Autumn and Winter Plan 2021 [JB/015/INQ000137065]. HM Treasury also used the analytical community across government to inform and strengthen its assessment of the economic outlook and to ensure Cabinet Office colleagues were able to draw on the latest economic analysis when synthesising information drawn from across government. For example, HM Treasury officials, including myself, were an integral part of the Heads of Analysis group which was set up November 2020. This group, chaired by the Taskforce and also containing representatives from the JBC, DHSC, ONS and Government Office for Science, met on a weekly basis to align the analytical efforts across

government and produce integrated analysis which took into account the health, economic and social impacts of the virus and interventions [JB/016/INQ000236549, JB/017/INQ000236550].

63. An example of a product that resulted from these meetings was the development of the JBC's toy model, discussed in more detail below. HM Treasury officials also routinely worked with the Department for Transport ("DfT"), Department for Education ("DfE"), Department for Work and Pension ("DWP") and BEIS, for example synthesising the latest data available across government into regular ministerial products shared with the Chancellor [JB/008/INQ000184619, JB/009/INQ000184624, JB/010/INQ000184627, JB/011/INQ000184631].

64. HM Treasury produced scenario analysis that sought to map out how differing paths of the virus and subsequent restrictions might affect headline macroeconomic variables and the fiscal position. For example, HM Treasury conducted analysis of how different paths of the virus could cause economic scarring – the medium to long-term economic damage that can occur following a severe economic shock which then leads to a recession - and how this could be mitigated through policy. This analysis informed policy decisions, such as in education policy to limit the impacts of education driven scarring. The analysis also informed the OBR's assessment of economic scarring from Covid, initially produced in their November 2020 EFO and revised in subsequent EFOs. Such analysis built on the OBR's reference scenario analysis published on 14 April 2020.

65. I took up post in November 2020 as the UK was going into a second lockdown. Throughout the pandemic, HM Treasury worked up assessments of the impact of different policy choices on different groups. This related both to the impact of the NPIs, including the economic shock caused by Covid restrictions, and on the economic support introduced for businesses. The analysis put to ministers throughout the pandemic was compiled from various

sources, including qualitative and quantitative evidence, drawn from both inside government and work undertaken by credible external organisations.

66. As discussed earlier in my statement, a particularly useful line of analysis when I started was using the available regional indicators, particularly google mobility data, in combination with data pertaining to the regional variation in restrictions that had occurred, in order to infer the impact of different 'tiers' of restrictions on the economy. This analysis allowed for a deeper and more granular understanding of the relative economic impact of different types of restrictions. This evidence base was shared with the Cabinet Office and also published as part of the Budget and Roadmap in 2021.

67. The picture of the differential initial impacts of Covid-19, including the economic shock caused by restrictions, was built over time as various economic interventions were introduced, and their collective impact on different groups could be analysed by the government and experts. Subsequent analysis focussed also on the capacity of proposed interventions to either mitigate or exacerbate the impact of the economic shock on particular groups.

68. As we collated more data, we also found evidence that firms were able adjust to economic restrictions over time, so that a given restriction had a smaller impact in the long term. By way of example, some eating and drinking establishments set up outside spaces to mitigate the impact of social distancing measures in a safe way. This meant that early estimates of the impact of a given restriction were not necessarily a valid estimate of the impact of the same restriction at a later point in time.

69. International comparisons also informed HM Treasury's advice to ministers on, among other issues:

    (i) Comparisons of the development and implementation of other countries' economic support measures, which could be used to inform

the development and implementation of our own economic support package;

(ii) How the pandemic and associated proposed NPIs were affecting, and how any changes might affect, the economy, and how economic activity might affect the progress of the virus;

(iii) How government support and wider policy responses might offset these impacts (or create unintended consequences);

(iv) The relationship between the epidemiological and economic outlooks;

(v) How the government's response including on NPIs compared to other countries' responses.

70. Looking across the analysis and modelling provided through the course of the pandemic, HM Treasury officials produced invaluable analysis to support decision-making on NPIs and the associated support schemes [JB/008/INQ000184619, JB/021/INQ000184609]. HMRC shared management information on the characteristics of those using the schemes and HM Treasury shared analysis on the economic performance of different sectors to identify which could be most impacted by future NPIs [JB/022/INQ000236572, JB/023/INQ000236573].

71. HM Treasury proactively engaged with the IMF and the OECD. The OECD conducted extensive work on governments' policy responses to Covid, including evaluating the impact of containment measures on activity and spending [JB/018/INQ000226503]. HM Treasury officials closely monitored the OECD's Economic Outlook and engaged with the Economic Survey [JB/019/INQ000236537]. HM Treasury officials further attended the OECD's Short-Term Economic Prospects forum to discuss OECD forecasts before publication. The IMF also developed models comparing the virus's relative impact and NPIs on economic activity, while the OECD produced projections

on the economic impacts of single versus multiple lockdown scenarios and a real-time economic activity Nowcast.

72. I started my role at HM Treasury in November 2020. By that point the OBR had published a range of scenarios and continued to do so. We engaged regularly and openly with the OBR to keep both forecasts and scenarios fully informed by our internal work. Generally, the frequency with which these scenarios were updated kept pace with the changing outlook for the economy such that these OBR forecast provided a sufficient basis to engage with other departments. I recall one occasion during my tenure, where an economic development occurred unrelated to the pandemic that was not captured by published OBR scenarios at the time, and therefore where HM Treasury had produced an internal set of scenarios to gauge the implications for macroeconomic outlook. That related to Russia's invasion of the Ukraine, and we did share those scenarios across government departments as well as with the Cabinet Office so that the scale of implications for the UK macroeconomic outlook could be rapidly understood.

73. From November 2020 through to the publication of the roadmap document in February 2021 and the evaluation of the evidence-base ahead of the various steps in that roadmap, there were exchanges of views and perspectives at regular meetings of the Covid analysis group convened by the Cabinet Office that I was a part of. One extremely helpful development, in my view, was the development of the JBC 'toy model' which allowed for analysts across government to test the implications of different assumptions on, for example the current rate of spread of the virus, the future path of non-pharmaceutical interventions, on the modelled spread of the virus in the future.

74. HM Treasury analysts worked with JBC to support the development of that model at various stages. I expand on this toy model in response to some specific questions by the Inquiry below. The opening up of increased access to this modelling allowed for a range of views and perspectives to be brought together. It was important that the toy model, which was stylised and simplistic, was used largely for thought experiments, to aid general

understanding, and not as a basis for policy decisions. Detailed modelling by SPI-M drawing on a range of more complex and sophisticated modelling was used to aid policy making, but insights from the toy model were used to test the assumptions used in that modelling. I recall one meeting, I think in December 2020 or January 2021 where some expressed concern that the toy model had been used to conduct thought experiments over long periods. The discussion around this was, in my view, very useful as it led to a well specified commission to be drawn up for the more sophisticated models to consider the effect of a range of different assumptions on the path for restrictions in relation to the spread of the virus as vaccines were being rolled out. The toy model allowed for a range of perspectives to shape that commission which produced a stronger output. I also recall a number of meetings and exchanges throughout January and February 2021 where a key input in the modelling, the current estimate of 'R', appeared to be lagging the latest developments on cases, which were clearly falling, I think because the way processes were set up at the time created a lag in the system. Challenge, which in this case came from HM Treasury, helped us to align on a more timely estimate of this input and improve the accuracy of the modelling that followed. Overall, I thought the system coordinated by the Cabinet Office very effectively brought a range of perspectives to bear on a highly complex topic.

75. I recall as the group first came together, before we benefited from the detailed modelling, there were a wide range of views. For example, I recall being told that one member of SPI-M briefed the Office for Budgetary Responsibility in January that it would not be safe to take off any restrictions until September 2021. As the group came together and exchanged perspectives, the range of views narrowed considerably and the modelling and analysis during that period led to the construction of, in my view, a very good roadmap document to guide the relaxation of restrictions that remains an exemplar for me of both collaboration across government departments and of analysis driving policy conclusions. The modelling in that document projected the evolution of the virus for the variant we had at the time well and laid out a path for restrictions to begin to be removed from Spring 2021. And the focus on data not dates and on hospital occupancy rather than cases, both of which were pushed by

HM Treasury, served us well. The different perspectives that were brought together very naturally drove more robust assumptions and modelling and a stronger collective conclusion. The Cabinet Office are in my view to be congratulated for the process that they ran through this period.

76. I have also been asked about the role of scenario analysis. As discussed in further detail below, scenario analysis is distinct from forecasts as it does not attempt to predict the most likely outcome of key macroeconomic variables. It instead provides a view of what could happen under different conditions. This type of analysis does not attempt to capture all possible ways in which the economy might evolve, nor does it attach probabilities to the scenarios considered. It instead provides a means to explore the effects of varying key assumptions within a model framework. This helped to size the risks we were facing and the key variables they depended on. The modelling brought home, for example, the critical importance of avoiding scarring to the economy and, therefore, the value of measure taken to avoid scarring. It was also useful for exploring the robustness of the fiscal position to different eventualities.

77. In addition to Epi-macro modelling, which is discussed in detail below, I recall the following models being used within the department to help to inform decision-makers.

NiGEM

78. HM Treasury had already begun using the well-developed National Institute's Global Econometric Model (NiGEM) by the time I had taken up post. This model can be used for a number of purposes, including to assess how shocks to the economy – both internal and external – affect key macroeconomic variables.

'Nowcasting'

79. One technique HM Treasury officials routinely used to assist understanding of the near-term outlook for economic growth was its 'Nowcasting' framework [JB/024/INQ000184628, JB/025/INQ000184626]. The framework uses a range of data from external bodies and a set of equations to assess changes

in Gross Domestic Product in current and (a limited number of) future months. Given the unprecedented nature of the circumstances, the reliability of established data sources was reduced such that the framework had to be rapidly updated to incorporate new data sources and real time indicators after the onset of the pandemic. The results from this framework were used extensively and regularly in economic monitoring products shared with ministers. Nowcasting helped us to judge how the economy was evolving relative to previous forecasts, which in turn informed preparations for various fiscal events, such as the Budget.

Labour supply model

80. HM Treasury also used a labour supply model, which had been developed rapidly in March 2020 before I took up post. The purpose of this model was to understand the potential economic impacts of different forms of societal restrictions under consideration by ministers, including isolating individuals with suspected cases of Covid-19, enforcing household quarantines and mandating school closures. This body of analysis supported briefing products and was incorporated into speaking notes for ministers [JB/026/INQ000184563].

Firm-level model

81. Prior to my taking up post, the department had procured a firm-level model that takes illustrative macro assumptions and converts them to micro-outputs looking at the effects on firms' solvency and employment levels [JB/027/INQ000236558, JB/028/INQ000236545]. The objective of using this model was to add a firm-level perspective to HM Treasury's analysis, and to assess how policy interventions interacted with trading conditions.

Model development and epi-macro modelling

82. Epi-macro modelling combines epidemiological and economic interactions to estimate how characteristics of the virus and of control policies affect both transmission and economic activity. While epi-macro analysis had long been undertaken by health economists, it gained prominence as the pandemic

emerged, and internationally renowned researchers combined macroeconomic modelling with analytical tools from epidemiology.

83. I understand that work on developing the department's understanding and capability in epi-macro techniques began at official-level in summer 2020 before I was in post.

84. Once I had taken up the role of Director of Economics Group and following confirmation by the OBR in their November 2020 forecast [JB/029/INQ000114451], it became clear that mass vaccination would shift the relationship between the epidemiological and economic impacts. To support internal understanding, the department adapted a previous epi-macro model to explore how the vaccine rollout would interact with NPI policy to shape the path of the virus, as well as the resulting economic consequences. Early results and preliminary conclusions from this model were shared with the Chancellor on 18 December 2020 [JB/030/INQ000116404]. This considered a wide range of scenarios covering different assumptions of vaccine effectiveness and considered both a complete and partial lifting of restrictions once the Joint Committee on Vaccination and Immunisations ("JCVI") priority cohorts had been vaccinated. Preliminary conclusions from early results showed that vaccines could enable a partial removal of NPIs without a large wave of hospital admissions. Results also showed that the path of the virus was highly dependent on the extent to which vaccines prevented transmission from person to person, which was still uncertain at the time.

85. These conclusions were supported by the publication of early vaccine modelling by the Scientific Pandemic Influenza Group on Modelling ("SPI-M"), one of the various sub-groups that made up SAGE, on 9 December [JB/031/INQ000114467].

86. Given the significance of the speed of vaccine deployment, and their effectiveness in preventing hospitalisations and severe disease, the Chancellor asked HM Treasury officials to use the modelling capacity to consider different scenarios for the speed of NPI easing and how that would

interact with potential changes to economic support programmes. HM Treasury officials sent the Chancellor updated modelling results on 15 January, which also considered modelling from Imperial College and the University of Warwick [JB/032/INQ000113711, JB/033/INQ000114448, JB/034/INQ000114449].

87. HMT officials worked with the Covid-19 Taskforce ("the Taskforce") to develop the February 2021 Roadmap for exiting lockdown and provided input on the Taskforce's commission to SPI-M for the modelling of infections and hospitalisations under different scenarios. The output of that SPI-M modelling provided the definitive base on the outlook for the virus under different assumptions to underpin policy decisions. HMT's broader work on the economic impact of closing different sectors, which drew predominantly from detailed empirical studies of the impact of the virus rather than more broad-brush conclusions from epi-macro modelling, was used to inform the body of evidence which showed the impact of different paths for restrictions on the economy. HMT's analysis in this area was used to brief the Chancellor and was also shared with the Covid Analytical Group within the Cabinet Office.

88. Following the emergence of both the Alpha and Beta variants of the virus, the risks posed by new variants to the delivery of the Roadmap, became increasingly clear. As a result, and following the publication of the Roadmap, the Joint Biosecurity Centre ("JBC"), which was tasked with providing real time analysis and assessment of infection outbreaks at a community level, to help better understand the nature of emerging variants and their interaction with vaccines and NPIs. This built on a 'toy model' which was expanded to allow for different variants of concern. A toy model is a very basic model which can be used to run different scenarios by altering basic assumptions. This model was not designed to replace SPI-M modelling, which continued to be used in order to advise ministers, but instead to allow officials across government to understand how the characteristics of new variants (including transmissibility and severity) could change the path of the virus. Officials (including from HM Treasury) provided some analytical input to quality assure

the model, and feedback on which features would be most useful for policy makers to understand. HM Treasury officials, amongst others, had the ability to use this model following quality assurance process.

89. In the course of spring 2021, this JBC toy model was used to produce illustrative scenarios (sent by HM Treasury officials to the Chancellor on 6 May 2021), to demonstrate how modelling could help officials across government to understand how various characteristics of new variants could impact the path of the virus, and to show the extent to which new variants were highly sensitive to assumptions on vaccine efficacy and transmissibility. The model was not used to advise on any policy decisions [JB/035/INQ000113735, JB/036/INQ000113736]. The modelling focused on Beta as there was more data available on vaccine effectiveness. The slides also flagged the risk posed by the Delta variant. In December 2021, whilst I was on parental leave, as the Omicron variant emerged, HM Treasury officials again used the JBC toy model to understand the range of potential outcomes for infections, hospitalisations and deaths. Provisional conclusions were sent to the Chancellor to support existing assessments of what policy action may be needed to avoid overwhelming the NHS. [JB/037/INQ000116431]. As set out in the briefing, there was huge uncertainty around the characteristics of Omicron and the analysis was therefore very preliminary. Subsequent briefings for the Chancellor used SPI-M modelling, as soon as this became available.

90. Though the toy model was used to keep the Chancellor informed in real time about the possible implications of different variants as well as to aid his understanding of evolving risks to health and the economy, it wasn't used as a basis for policy decisions on the path of restrictions. These decisions were based on a full pack of evidence, including a full review of data and more sophisticated modelling by SPI-M.

91. As detailed above, the Covid pandemic was above all a health crisis. As such, it was a priority for HM Treasury officials to have a detailed understanding of the likely path of the virus, as the speed with which the public health position

evolved and its interaction with , NPIs, as well as the need for economic policy to align at all times with the government's public health strategy. To support this, Vanessa McDougall, from March 2020 then myself once in post in November 2020 attended SAGE meetings in an observer capacity and received papers from the various sub-groups that made up SAGE such as the SPI-M, the Scientific Pandemic Influenza Group on Behaviour ("SPI-B"), and the New and Emerging Respiratory Virus Threats Advisory Group ("NERVTAG").

92. Furthermore, senior HM Treasury officials routinely attended JBC meetings chaired by SoS DHSC, where the latest health data was discussed. Across government, and as discussed in further detail below, epidemiological modelling was also a vital tool used to understand the range of possible outcomes for the path of the virus.

93. In terms of economic effects, as detailed above, our understanding developed over time as more data became available in relation to the realised impact of different restrictions as the economy's response to a given restriction itself changed over time. We were inherently dependent on a continual flow of data to understand the various impacts on the economy and how they were changing. Due to the lags involved in making data available and the granular and changing nature of the restrictions themselves, it was and is, in my view, impossible to build a model that fully captures all of the evolving impacts on the economy.

94. The most useful body of evidence, which again, developed over time, came in the form of estimates of the impact of a given restriction on health and economic outcomes. This led to a very useful rank ordering of restrictions in terms of their impact on the spread of the virus, relative to their economic cost. Compulsory face masks, for example, fared well, whereas the closing of shops was a more costly way of controlling the spread of the virus. This ranking system, which was updated over time, helped guide the order in which restrictions were removed and the design of contingency plans to put them back on again. This system worked well.

95. In terms of the speed with which restrictions could be safely removed (or with which they had to be reapplied) this was ultimately a judgement about the evolution of the virus absent and with a change to restrictions. One could generally estimate an economic impact for a given proposed change, but the key judgement was on the evolution on the virus, rather than on an interaction between health and the economy. This itself was complicated by the fact that the nature of the virus itself was evolving over time. Looking back, it was often when the nature of the virus was changing, for example the evolution of a new variant where it became most difficult to make a good judgement on the future outlook. An important factor driving robust decision-making here was the gathering data on the properties of a new emerging variant and the time taken to reach robust conclusions on what it meant.

96. The Inquiry has asked me to comment on what could have been improved in relation to the modelling and scenario analysis carried out by HM Treasury. The collaboration across government departments, which was facilitated by the Cabinet office, was very important. It would have been useful if that set up had been established earlier. It was established as I started in role and it inevitably took time for the cross-government team to fully form and function cohesively.

97. In developing its analytical tools for economic and epi-macro analysis, the department sought a wide range of views from credible and trusted institutions and academics throughout the pandemic. The Covid analysis group convened by the Cabinet Office was as I have said instrumental in bringing together and promulgating a wide range of views, including via its access to SPI-M and SAGE. I also benefited from being able to observe SAGE meetings.

98. HM Treasury was also in very regular contact with teams and senior officials at the Bank and OBR. This allowed the department to synthesise perspectives from experts on the economy and our overall understanding of impacts on different aspects of the economy. The frequency and nature of both regular and ad hoc meetings worked effectively and lines of

communication were at all times smooth. HM Treasury also embarked upon more long-term model building work through collaboration with the OBR and external academics, resulting in the development of an Overlapping Generations Model that later proved useful in understanding drivers of long-term interest rates. For completeness, the Overlapping Generations Model was not a tool designed or used specifically for the pandemic. It did however help the department to understand the drivers and implications of movement of long term interest rates – this ultimately became highly relevant for economic recovery following the pandemic.

99. HM Treasury provided advice to the Chancellor on 21 January 2021 in relation to re-establishing a Council of Economic Advisers (external expert economists). Whilst Council members would not be asked to produce their own papers, analysis or policy recommendations, the objectives of the forum were to be focused around providing the Chancellor with an independent, objective, and original perspective on economic questions, and create a forum for the discussion around cutting-edge economic research, evidence and thinking [JB/038/INQ000236569]. When this forum was proposed, the Covid vaccine rollout was in its early stages and the dominant economic policy issue was how the economy could best emerge from the pandemic. Had the Council been established, in all likelihood it would have considered this issue among many others. The Chancellor agreed with the structure proposed by HM Treasury officials, however, while No.10 initially communicated the Prime Minister's interest in the forum, their engagement on the proposals ceased in May 2021 and as such the Council was not established [JB/039/INQ000236566]. The proposal and initial development of a Council of Economic Advisers coincided with a particularly intense time for No.10 and government departments as well as the publishing of the Roadmap and Budget 2021.

100. HM Treasury stepped up the sharing of analysis and was central in developing economic understanding with other departments more widely as the structures and processes needed to do so became more sophisticated over time.

101. Summaries of HM Treasury analysis was published during the pandemic, for example, as part of the May 2020 and February 2021 "Roadmaps", [JB/012/INQ000181691] [JB/013/INQ000089798] the November 2020 Covid-19 Winter Plan, [JB/014/INQ000137262] and the Autumn and Winter Plan 2021 [JB/015/INQ000137065]. The department also contributed to the Social Distancing Review [JB/040/INQ000182182] during this period.

102. Furthermore, all fiscal decisions taken by HM Treasury were set out transparently in publications at fiscal events: at Budget 2020 (11 March 2020); A Plan for Jobs 2020 (8 July 2020); Winter Economy Plan (24 September 2020); Budget 2021 (3 March 2021); Autumn Budget and SR 2021 (27 October 2021). These documents each included a 'policy decisions' chapter which summarised every policy decision taken and the scoring implications of those measures. They also included the latest economic and fiscal forecasts as provided by the OBR. We also included analytical boxes on important issues affecting the economy.

103. HM Treasury did not publish academic-style papers for discussion in the way that SAGE did but instead focused resources on undertaking analysis that best informed decision making. In aid of assisting more rapid and informed internal decision making, the department did step up the sharing of analysis and was central in developing economic understanding with other departments more widely as the structures and processes needed to do so became more sophisticated over time. The main place that analysis was shared was through weekly group meetings coordinated by the Cabinet Office.

104. Overall, as a department, we sought to share what we could and as quickly as we could. As data on the impacts of different aspect of the pandemic became more available, we had a richer evidence base and more analysis to share.

105. I have already mentioned the work I oversaw to improve data science capabilities at HM Treasury. When I took up my position as Director of Economics Group in 2020, we also quickly launched a review of HM Treasury's modelling capability.

106. The Economics Group Model Review was commissioned in order to ensure the Economics Group could:

a. improve economic analysis and policy advice,
b. tackle existing issues that dominated economic policy making and;
c. tackle new policy questions likely to arise in the future [JB/041/INQ000653226].

107. The review was concluded in 2021 and actions included but were not limited to, improving existing models, investing in new models, the creation of a model register and further external engagement, for example with the BoE and OBR [JB/042/INQ000653227]. This led to the building of an Overlapping Generations Model which had been identified as a gap.

108. It is my understanding that the idea to have an HM Treasury representative at SAGE meetings was raised by the GCSA Patrick Vallance to the Treasury Permanent Secretary in March 2020.

109. When I joined in November 2020, Vanessa MacDougall had already been an observer by way of invitation from the GCSA as SAGE co-chair, via the HM Treasury Permanent Secretary and CEA. When taking over from Vanessa, my role in these meetings was simply to observe discussions concerning the latest findings and analysis in order to ensure that HM Treasury officials and ministers continued to have access to the most up to date science and epidemiological knowledge. My recollection is that I was not expected to contribute to discussions, but to relay key takeaways and updates to the rest of the department.

110. These meetings supported the department's understanding of the path of the virus as well as the level and type of risks posed. As such, they were a critical rolling source of information, and I understand that the insights provided in my readouts were used to inform economic policy and support various workstreams within the department.

111. The SAGE meetings generally gave an early read of when the virus was at an inflection point as well as the possible causes of its given path. Whilst it was possible to see this from other data sources, the SAGE meetings brought together a very comprehensive picture and range of expert views. I recall the meetings being invaluable for HM Treasury's understanding of the virus and providing a critical source of input into economic policy.

112. I would email readouts of the SAGE meetings with HM Treasury officials and ministers, including the Chancellor, following these meetings, usually within 24 hours. HM Treasury officials used the information shared at scientific committees and cross-government analytical groups, including SAGE meetings, to inform briefing or advice for the Chancellor and other HM Treasury ministers ahead of ministerial decision-making meetings and to inform internal policy development. For example, ahead of the Roadmap review point in May 2021 the Chancellor received a briefing from HM Treasury officials which included an assessment of the latest SAGE advice and briefing on prior SAGE modelling and the latest data. [JB/043/INQ000088057, JB/044/INQ000088056].

113. I was not in post for EOTHO and so cannot comment on how SAGE meetings fed into policymaking in this area.

114. 5 November 2020 was the first time I attended a SAGE meeting as Vanessa MacDougall's first successor. Ahead of the meeting I was verbally briefed by Vanessa that I was to be an observer at the meetings and that it was imperative that I circulate a full and timely readout of the meetings to the

department afterwards. Vanessa also shared her readouts of recent meetings by way of example.

115. I was an observer and therefore did not have a speaking or presenting role in SAGE meetings. The information gathered at these meetings was however deeply useful for the department when determining policy making and was often considered in advice to ministers, including the Chancellor.

116. I have been asked to confirm my input at the following SAGE meetings where the Inquiry has identified economic considerations being discussed in the minutes:

a. SAGE Meeting 68, 16 November 2020
b. SAGE Meeting 69, 19 November 2020
c. SAGE Meeting 72, 10 December 2020
d. SAGE Meeting 84, 25 March 2021

117. As outlined above, my role at SAGE meetings was to observe, and not to contribute to discussions. I do not recall being asked to contribute to any of the discussions at these meetings.

118. Whilst I understand the Inquiry's interest in any role I may have had in contributing to discussions at SAGE meetings where economic factors were a point of discussion, it was not my role to add to these discussions, and I do not recollect doing so or being asked to do so. I was instead expected to relay what I had observed to HMT colleagues in order to ensure there was alignment between the latest thinking at SAGE and the work of the department where subject matter crossed over.

119. Furthermore, the topics identified by the Inquiry at these meetings would often fall within the mandate of other government departments who were either responsible for the issue in question, even if there was an economic

dimension involved, or for carrying out internal analysis in relation to that issue. For example, where questions arise regarding the financial support of vulnerable people, the relevant HM Treasury policy team might contribute to discussions with the lead department, but primary responsibility for policy and decision-making on that issue will remain with that department.

Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

Signed: Personal Data

Dated: 3 October 2025