Update - the impacts of the Covid-19 pandemic

Purpose of assessment

This assessment is intended to support the FSA in understanding changes in the food system related to the COVID-19 pandemic, as they relate to the FSA mission. It is limited in scope to understanding the implications for the work of the FSA and so does not consider the wider societal impacts. It builds on key findings from existing research and analysis undertaken throughout the period of the pandemic.

Key Judgements

1. Behaviour changes brought about by COVID-19 restrictions and health practices are likely to have led to a temporary drop in the incidence of some food borne diseases (para 1).
2. The adoption of an increasing range of online platforms by consumers and food businesses during the pandemic will almost certainly remain and present challenges to food regulation and its enforcement (paras 2-4).
3. It is highly likely that people's lives when it comes to food have become increasingly varied and will continue to present a more diverse risk environment for the FSA to deal with after the pandemic. This is particularly driven by the long-term trend towards increasing food insecurity (exacerbated by COVID-19) and the underlying economic divergence (paras 5-12).
4. There is almost certainly an increased appetite for government intervention to ensure food safety and availability. This is not universal, but experiences during the pandemic are likely to have shifted public attitudes, presenting an opportunity for interventions (paras 13-14).
5. Although there is likely to be increased vulnerability to food crime in some consumer groups due to COVID-19 related changes, there is very little evidence of this being exploited (paras 15-17).
6. The response to the pandemic forced a reconfiguration of FSA activities, leading to changes in working practices, and a renewed focus on intelligence and risk led activities (paras 18-21).

Assessment

Food safety

1. It is likely that changed behaviours and lockdown restrictions led to a short-term improvement in the prevalence of food borne disease due to the COVID-19 pandemic. Data on this is currently limited, but a report by Public Health England looking at the incidence of Gastrointestinal (GI) related issues found a general decrease in levels of GI issues in the first six months of the pandemic.[1] Compared to a five-year average (2015-19) GI incidents dropped by 52% in the first six months, with a 34% decrease in laboratory confirmed cases.[2] While several factors led to this, it is likely that "Control measures implemented during the COVID-19 response including improved hand hygiene, reduced social contact, increased environmental cleaning and closure of premises" were prominent given that transmission of many GI pathogens is "typically faecal-oral, predominantly though consumption of contaminated food or water".[3] There was a difference in reductions of various pathogens, with those pathogens spread predominantly by person to person contact decreasing more than those more commonly foodborne.[4] The prevalence of GI issues is of course only one metric and aspect of food safety, and so any findings in this area are tentative.

Industry Operating Models and Practices

2. The pandemic accelerated the adoption of online platforms by consumers and food businesses.[5] When lockdown started in March 2020 there was a sharp increase in the proportion of online retail from food stores, and there are no indications of any drop in levels.[6] This trend has almost certainly been driven by the periods of lockdown inhibiting in-person shopping, allied to commercial innovation benefitting from the use of smart device based apps and specialist websites allowing access to a customer base without requiring retail premises or extensive marketing. This trend will almost certainly remain as it offers clear

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[1] *The impact of the Covid-19 pandemic on gastrointestinal infection trends in England, February-July 2020* April 2021 Public Health England The impact of the COVID-19 pandemic on gastrointestinal infection trends.
[2] Although there were some variations, it was consistently lower than the previous five-year average.
[3] ibid p4.
[4] ibid p12.
[5] *Food in a Pandemic*, p 47 Food in a Pandemic | Food Standards Agency.
[6] See https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/january2021 and internal FSA report *Economic and Market Intelligence Brief*, April 2021, Analytics Unit, FSA.

commercial and consumer benefits independent of the lockdown conditions.[7] Of those consumers who ate more food from takeaways during the pandemic, 49% said they thought it would continue after the pandemic.[8] Whether it will substantially increase in scale is unclear given just how prevalent it currently is, as consumer demand is likely to act as a limiter to its scale

3. The increased adoption of online platforms presents several issues in terms of food safety risks:

    a. The multiplying of operators and functional specialisations that online platforms enable is likely to create misunderstandings of where responsibility lies for complying with food safety regulations.[9]

    b. The ease with which online platforms allow entry to the marketplace also increases the potential for inexperienced individuals to operate without understanding the legal and regulatory requirements. For example, the use of platforms such as Facebook Marketplace allow individuals to sell food they have prepared at home. It is likely that some of these individuals will not be aware of food regulations, and the actions they are expected to take under them.

    c. The increase in 'dark kitchens' is not intrinsically a negative development. However, the often more temporary nature of the kitchens compared to traditional restaurant and retail premises, their scale, and the practice of preparing food types that might not be within the experience of the staff present some risks. The ability to quickly identify and close businesses could also present challenges for regulatory enforcement actions.

4. The increase in the use of online platforms is likely to also present opportunities for the FSA. The increase in data availability can provide a much better understood and monitored food system if it can be accessed and processed appropriately. This could apply to issues such as traceability, as well as wider understanding of the risk environment and how it changes. The potential for businesses to become more functionalised in certain areas also has the potential to provide more expertise in specific areas and support the implementation of

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[7] For examples of commercial benefits see *Understanding Platform Businesses in the Food Ecosystem* p20-21, 2021, Foundry4 & FSA, in press.
[8] Compared to only 23% who thought they would not continue to eat more takeaway food, *Food in a Pandemic*, Food in a Pandemic | Food Standards Agency.
[9] One element of online platforms is the shift from vertical integration of supply chains to a more locally networked version where an online platform can provide a hub or spoke for multiple service providers to cooperate. For example, consumers using an online platform to order a meal from a takeaway, who then contract a 'dark kitchen' to prepare the food, who then use a delivery agency to transport the food to the consumer.

safety standards. The extent to which online platform businesses consolidate will influence their ability and influence in enforcing safety standards in their own and others' businesses.[10]

Food and consumers

5. Consumers interactions with food are highly likely to have become more diverse making the ability of the FSA to understand consumer needs and communicate effectively with those consumers more challenging. The divergence is driven by the already disparate socio-economic fortunes of individuals increasing due to the differing impacts of COVID-19 and ability to financially absorb those impacts, followed by the 'k-shaped' recovery.[11] This has led to different consumer behaviours, and hence increasingly divergent food safety and availability risks.

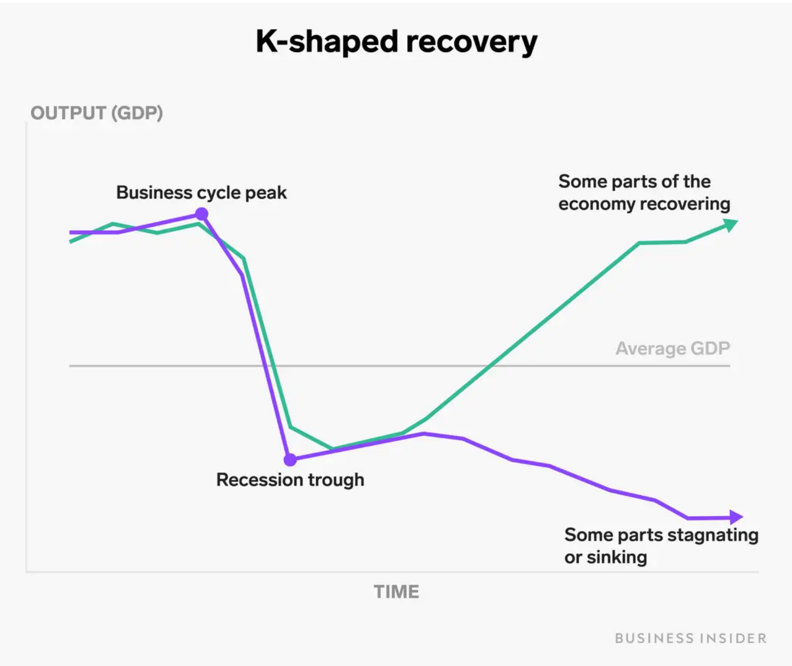

Chart 1: the k-shaped recovery.[12]

6. Food insecurity increased due to the pandemic. An increasing disparity between earnings and food prices has been present for some years (for example see chart

[10] *Understanding Platform Businesses in the Food Ecosystem* p22, 2021, Foundry4 & FSA, in press.
[11] See *Economic and Market Intelligence Brief* April 2021 slide 10, Analytics Unit, FSA. A K-shaped economic recovery essentially means that the well-off do better, while the less well-off do worse, widening the economic gap between them.
[12] ibid.

2 below).[13] The pandemic has brought it into much clearer focus though; one survey found that for the three weeks from 23 March 2020 16.2% of adults experienced food insecurity compared to 7.6% over the 2017 calendar year.[14] Between April 2020 and March 2021 the Trussell trust distributed 2.5 million emergency food parcels, up 33% from the previous year, and 128% from 2014/15.[15] Data from Food and You 2 taken between July and October 2020 classed 16% of respondents as food insecure, with 7% overall classed as having 'very low' food security. The FSA COVID-19 Consumer Tracker shows that even in March 2021 20% of respondents were at least somewhat worried about that their household would not be able to afford food in the next month. In the same survey 18% had been forced to skip or cut down their meals due to affordability concerns in the past month.[16] Although definitions of food insecurity differ, and individuals can quickly move in and out of food insecurity, lack of access to food is a widespread societal issue and growing in scale.[17] This is particularly the case for BAME groups and individuals with disabilities who have been disproportionately affected.[18]

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[13] For examples of what food insecurity actually looks like see https://www.sustainweb.org/foodpoverty/whatisfoodpoverty/ Sustain (accessed 11 May 2021), and *The Lived Experience of Food Insecurity under Covid 19,* The COVID-19 consumer research | Food Standards Agency.
[14] *Vulnerability to Food Insecurity since the Covid 19 Lockdown: a preliminary report*, April 2020 Dr Rachel Loopstra. Publications - Food Foundation.
[15] End of Year Stats - The Trussell Trust, 2021 (accessed 7 May 2021). The Trussell Trust is the largest food bank organisation in the UK, supporting more than 1200 food banks in the UK.
[16] *COVID-19 Consumer Tracker Wave 12*, https://www.food.gov.uk/research/research-projects/the-covid-19-consumer-research.
[17] *Food and You 2*, Wave 1 p9, Food and You 2 - wave 1 | Food Standards Agency. Food security was classed using the US Adult Food Security Survey Module that uses a series of questions to segment respondents, so it is not possible to provide a single definition of what is meant by the different levels of food security. *Lived Experience of Food Insecurity under Covid-19* provides a picture of what food insecurity looks like for many.
[18] See *The Impact of Covid 19 on Household Food Security* p3, 2021, Food Foundation Publications - Food Foundation.

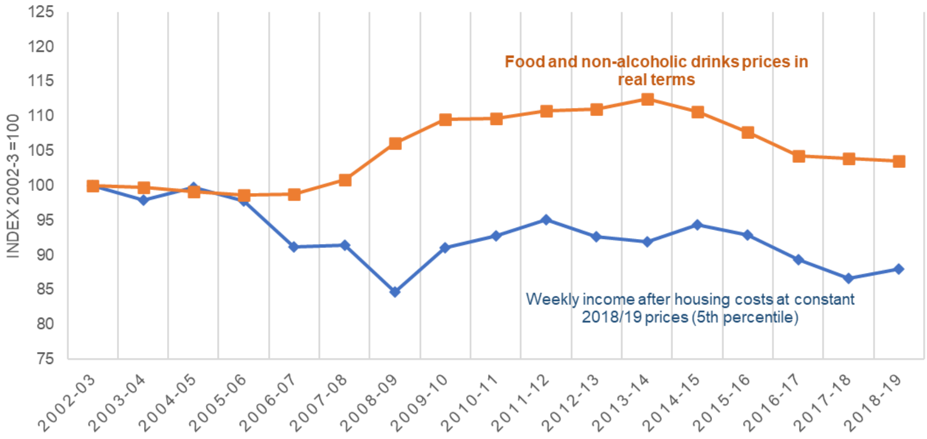

Chart 2: divergence between food and drink prices and weekly income of 5th percentile of households.[19]

7. At the very least food insecurity compromises the ability of consumers to choose the food that they eat. In the worst-case scenarios it will almost certainly lead to consumers either not receiving sufficient food, eating poorly, or consuming unsafe food (e.g., ignoring use-by dates) that will have immediate health impacts. Those experiencing food insecurity tend to buy "less nutritious food, have more 'unbalanced meals' and eat more food past its 'use-by' date".[20] The long-term impacts of poor diet can contribute to a range of long-term health conditions and poor outcomes such as obesity and diabetes.[21]

8. While there was temporary unavailability of some food types, particularly early in the lockdown period, food insecurity has largely been driven by the inability to afford food rather than availability.[22] The lockdown and increased food insecurity has disproportionately impacted lower income families. While not all employment sectors have closed, those that have been hardest hit are likely to have been characterised by the inability to introduce some form of home working, and employment contracts and conditions that do not favour government furlough support (e.g., jobs within the gig economy, zero-hour contracts). The ability to work from home for example favours higher earners, leading to an increased

[19] DEFRA Food Statistics Pocketbook, Food Statistics in your pocket: Prices and expenditure - GOV.UK (www.gov.uk) (accessed 11 May 2021).
[20] *Food in a Pandemic*, p23 Food in a Pandemic | Food Standards Agency.
[21] For example, *The Broken Plate* Food Foundation, https://foodfoundation.org.uk/wp-content/uploads/2019/02/The-Broken-Plate.pdf.
[22] For example *Food and You 2*, Wave 1 p29, Food and You 2 - wave 1 | Food Standards Agency for increased food insecurity in lower income groups, FSA commissioned report *The Lived Experience of Food Insecurity under Covid 19*, and *Food in a Pandemic*, p22 Food in a Pandemic | Food Standards Agency.

chance of lower earners being placed on furlough or losing employment altogether.[23]

9. The increased food insecurity has led to greater pressure on third sector food redistribution and supply schemes, and an increase in community sharing of food outside of formal networks and organisations.[24] The majority of food banks and redistribution schemes are likely to provide safe food, but it is a sector that is not well understood from a regulatory and risk perspective. The FSA has now commissioned work to better understand this sector.

10. Another development is the increase in consumers cooking at home, with 51% stating in an FSA study that they had cooked at home more during the pandemic and a correlation between those cooking more and eating healthier meals during the pandemic.[25] However, this was biased towards those based in London, those in full time employment, and higher earners.

11. There has also been an increase in shopping locally, with 28% of respondents stating that they have bought more locally produced food. It is notable that this again is not an even shift in behaviour across the demographic, but is focused on higher earning categories, with 35% of those earning £40 000 or more purchasing more food locally, compared to 25% of those earning below £40 000.[26] Notably for the increase in shopping locally, when asked if they expected it to continue after the pandemic 81% expect it to continue after the pandemic which suggests that other conditions permitting this might be a relatively enduring behaviour change.[27] The extent to which this might affect food safety is unclear without a better understanding of exactly what sort of outlets people are using.

12. These factors support the divergence of consumer behaviours, and the potential for a more varied consumer risk environment. If these differences remain in the long term they are likely to lead to very different health outcomes and food needs for groups.

13. There is almost certainly an increased acceptance of government interventions in the food system to ensure food safety and availability. The pandemic has led to an increased visibility and awareness of food insecurity amongst the wider population. For example, the prominent reporting of campaigning led by Marcus

[23] *Homeworking in the UK: Before and During the lockdown 2020*, p.i, WISERD Cardiff University, Homeworking in the UK: Before and During the 2020 Lockdown | WISERD.
[24] For example, https://www.trusselltrust.org/news-and-blog/latest-stats/end-year-stats/, 2021 (accessed 11 May 2021).
[25] *Food in a Pandemic*, pp.31 Food in a Pandemic | Food Standards Agency.
[26] *Food in a Pandemic*, Food in a Pandemic | Food Standards Agency., extracted from original data.
[27] Ibid p47.

Rashford has highlighted the extent of reliance on free school meals for many.[28] Additionally, support for those struggling to access food has been provided from within the community. One study found that 40% had shopped for food for others who were having to self-isolate, with 23% receiving that support.[29] Another study found that for some individuals their experiences during the pandemic had highlighted the importance of the food system, questioning the status quo.[30]

14. The FSA commissioned study *Food in a Pandemic* identified two distinct groups. The larger of these groups represented 55% of the population and favoured government intervention across a broad range of areas. This contrasted with a smaller group who were less supportive of intervention. However, there was agreement that the government should set the conditions so that people can feed their families. This highlights that there is support for broad government intervention in the food system across most of the population, and there is a middle ground even with those antithetical to such intervention.

[28] For example, Marcus Rashford and top chefs demand free school meals review - BBC News (accessed 12 May 2021).
[29] *Food in a Pandemic*, p7 Food in a Pandemic | Food Standards Agency.
[30] *Consumers and the Food System under Covid 19*, pp23-24 The COVID-19 consumer research | Food Standards Agency.

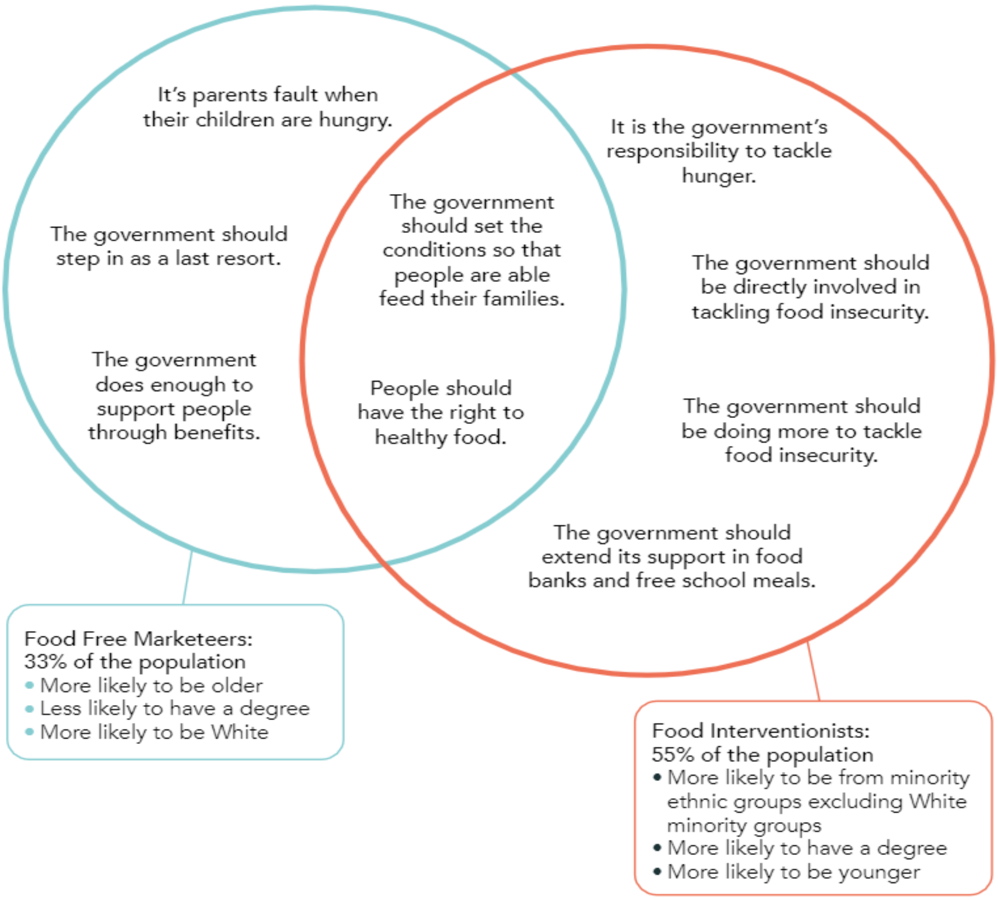

Figure 1: willingness to support government intervention, taken from *Food in a Pandemic*.[31]

Crime within the Food System

15. The increase in food insecurity is likely to have led to an increased vulnerability to food crime, although the extent to which this has been exploited is not well understood.[32] With limited funds available to buy food from well-regulated food businesses, there is an increased vulnerability to exploitation by unscrupulous individuals and groups providing inauthentic, misrepresented, and/or adulterated foods.[33] There has been some increase in reported food fraud internationally but the confidence in the significance of this increase is low. The modest level of information and evidence around this theme is likely to in part reflect the challenge

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[31] *Food in a Pandemic*, p 27 [Food in a Pandemic | Food Standards Agency](#).
[32] Increased vulnerability does not necessarily lead to exploitation.
[33] *Food Crime Strategic Assessment 2020*, p5 National Food Crime Unit (NFCU), FSA. For the increase in vulnerability as a result of a worsened economic situation caused by COVID-19 see also the *National Strategic Assessment of Serious and Organised Crime 2021*, p17, National Crime Agency [Annual threat assessment - National Crime Agency](#).

of collecting intelligence during this period.[34] It is also challenging to determine which fraud is linked to COVID-19 specifically, and what is linked to existing levels of risk or activity.

16. The expansion of the use of online platforms also presents regulatory concerns and some increased risk of food crime. The NFCU have previously highlighted the risks posed by the use of online platforms such as social media platforms.[35] The increase and continuing prevalence of the use of these platforms noted above will need to be taken into account when considering any changes to regulatory systems, or enforcement strategies.

17. It is also likely that there has been an increase in the prevalence of modern slavery with the UK food system although there is no estimate on the scale of the issue. The NCA assess that due to COVID-19 organised groups are likely to have placed victims within the food supply and warehousing sector due to displacement from sectors forced to close because of COVID-19 restrictions.[36]

The organisation

18. Inevitability the COVID-19 response impacted substantially on the FSA as an organisation.[37] A full assessment of the organisational impact in terms of organisation design is outside the scope of this paper, but some factors can be highlighted as the organisation shifted to delivering at a much higher tempo.

19. The impact of COVID-19 placed many demands and pressures on individuals that has required an increasingly flexible approach to working, in particular around working from home and flexible working arrangements. For much of the FSA working from home has been an effective option, with the FSA already well placed to support these more flexible styles of working. As with many other organisations, this has accelerated thinking on how the FSA can offer more flexible conditions in the longer term. Notably for other areas of the FSA though, home working has not been an option, with individuals in operations particularly affected.

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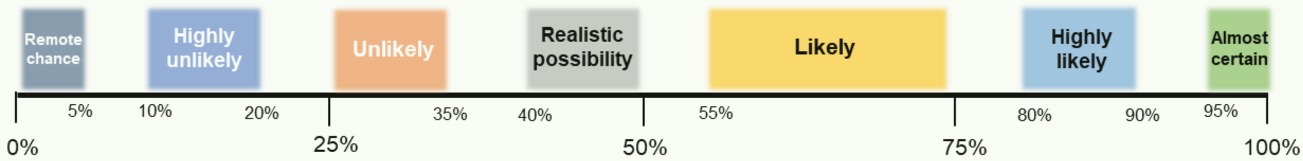
[34] For reported instances of food fraud see *Has Covid – 19 caused a significant increase in food fraud incidents?* March 2021, Institute of Food Science and Technology, https://ifst.onlinelibrary.wiley.com/doi/10.1002/fsat.3510_1.X (accessed 11 May 2021).
[35] *Food Crime Strategic Assessment 2020*, p4 NFCU, FSA https://www.food.gov.uk/sites/default/files/media/document/food-crime-strategic-assessment-2020.pdf.
[36] *National Strategic Assessment of Serious and Organised Crime 2021*, p23-24, National Crime Agency Annual threat assessment - National Crime Agency which also contains a short case study based on a prosecution for this activity.
[37] This is not to underplay the personal impact on individual FSA employees during the pandemic, which have been considerable, as elsewhere.

20. The response has arguably also accelerated the shift to a more 'intelligence led' organisation. Surveillance and horizon scanning programs have been accelerated. There has been a concerted drive to ensure the FSA has the situation awareness and understanding to prepare for emerging challenges and opportunities, and pivot to quickly respond to issues as they emerge. The response to COVID-19 led to the creation of a temporary round the clock 'Briefing Cell'[38], an incident surveillance program, and a range of horizon scanning and foresight work. These crisis management measures required units to prioritise their workloads more strictly and re-evaluate their priorities.

21. Partners were under similar pressures, and as their priorities changed this obviously impacted on the FSA. Perhaps most significantly was the change in the ability of local authorities to continue the same level of controls and interventions. Working with the local authorities, a revised approach was agreed with more stringent risk prioritisation to support local authorities in deploying their increasingly scarce resources to best effect. This has remained under review with longer term plans for recovery in place.[39]

Terminology

Where subjective probabilities are used, this assessment uses the 'probability yardstick' as prescribed by the Professional Head of Intelligence Assessment in the Cabinet Office. This assigns specific terms to probability ranges to ensure consistency of communication across the government assessment community.



[38] This consisted of 7 managers, and 48 volunteers working in core roles with support from nearly 50 other members of staff.
[39] *Local Authority Recovery Roadmap* FSA Board Paper 26 May 2021, available at https://www.food.gov.uk/sites/default/files/media/document/fsa-21-05-02-local-authority-recovery.pdf

Support for the judgements

How good is the information base, are there any substantial areas of known uncertainty?	There is a solid information base regarding consumer attitudes and behaviours based around large-scale high quality consumer surveys. Surveys undertaken independently corroborate each other. These are reflective of perceptions but are consistent with material examples of people's behaviour (for example, extent of use of food banks), and economic data. Some information gaps remain in relation to the impact on food safety and the extent of exploitation of vulnerable individuals, but they are unlikely to substantially undermine the key judgements.
What level of analysis has gone into this assessment, are there substantial remaining areas of uncertainty that have not been explored?	Additional challenge analysis could be undertaken regarding the findings, but the main conclusions are consistent with a broad range of opinion. The assessment has been shared internally within the FSA for peer review with comments received and acted upon.
Is environmental complexity and volatility likely to impact the key judgements?	The UK food system is a complex environment, and the course of COVID-19, and the overall political environment (particularly related to relations with the European Union and potential trade partners) can exhibit considerable volatility. These are unlikely to render the key judgements invalid given the timeframe of this assessment.