

# Covid-19 scenarios

## July 2020

Prepared by Experian for

West Yorkshire Combined Authority



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# Introduction: the project

Given the current economic uncertainty around Covid-19, key questions are at the forefront of our minds:

- How can we assess the impact of various COVID-19 scenarios on the key sectors that drive an area's economic growth?
- What is the exposure to unemployment risks and what could this mean for our residents/households' incomes?
- How could we support the evidence based strategies and local plans?
- Can we model different COVID19 scenarios?

The varying nature of businesses and demographics across the UK means it is inevitable that some regions, businesses and households will be impacted in different ways.

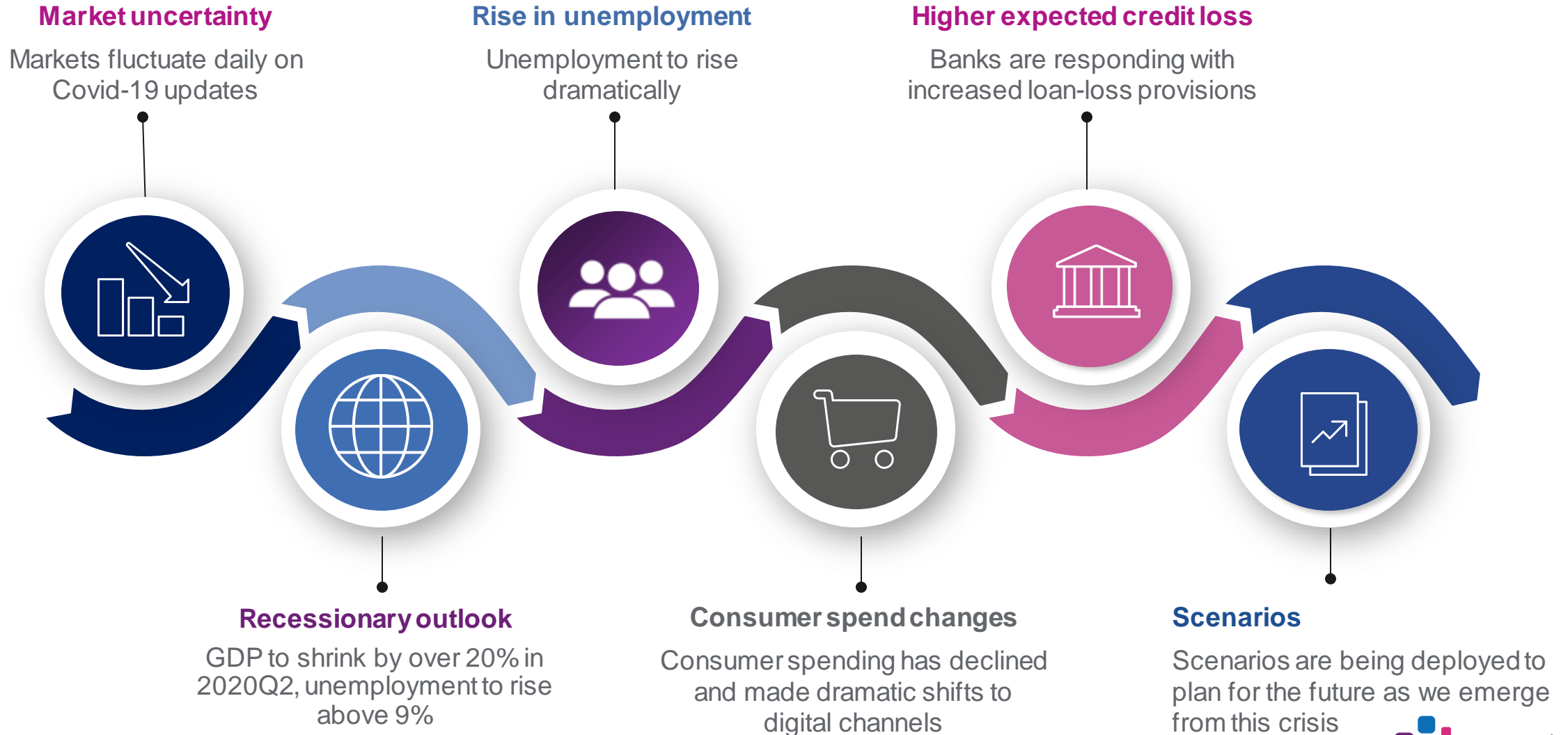
The project is jointly commissioned by Sheffield City Region and West Yorkshire Combined Authority to develop a consistent approach and to use scenarios to support recovery planning and policy work.

Experian have been commissioned to build a model that tests different economic scenarios and quantify the impact at the local level within West Yorkshire: Bradford, Calderdale, Kirklees, Leeds and Wakefield; and Barnsley, Doncaster, Rotherham and Sheffield within Sheffield City Region.

The scope of this project is to lay out the assumptions behind 3 scenarios: V-Shaped recovery, Delayed V-shaped recovery and W-shaped recovery. The UK scenarios have been agreed by the client and this has then been run through our econometric models to generate the local outcomes for GVA, workforce jobs, unemployment rates and household disposable incomes.

# Introduction: Covid-19 impacts

COVID-19 is having wide ranging effects on the UK economy:



# Executive Summary

## Highlights

**V Shape:** . A sharp reduction in output in 2020Q2 is followed by an rapid V-shaped rebound that begins in 2020Q3 and, in line with the OBR's reference scenario assumption, returns activity to pre-Covid levels by the end of 2020.

Sector summary: **Retail, Accommodation, Transport, Recreation** and **Transport Equipment** are particularly exposed. Least exposed include **Health** and **Pharmaceuticals, Telecoms, Computing and Information Services** and **Agriculture & Food Production**.

Local summary: Kirklees to be one of the hard hit area in term of GVA growth while Leeds is slightly less impacted.

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**Delayed V Shape:** Suppression policies and the associated enforced lockdown triggers a sharp drop in output in 2020Q2 as non-essential businesses and activities temporarily close. As restrictions are eased gradually, the economic recovery is modest in 2020Q3 but picks up momentum by 2020Q4

Sector summary: **Retail, Accommodation, Transport** and **Recreation** endure the greatest losses in the short term. **Construction** and **Manufacturing** suffer from a scaling back in investment projects. Least exposed include **Health** and **Pharmaceuticals, Telecoms, Computing and Information Services** and **Agriculture & Food Production**.

Local summary: Bradford, Leeds and Wakefield are expected to fare slightly better than the region as a whole while Kirklees performs worst.

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**W Shape:** A second lockdown leads to a sharp drop in GDP in 2020Q4. The reduction reflects the impact of the renewed closure of businesses, confidence impacts as business and households rein back spending, increased business insolvencies and further disruptions to supply chains.

Sector summary: **Retail, Accommodation, Transport** and **Recreation** suffer the most, along with **Construction** and **Manufacturing**. **Health** and **Pharmaceuticals** will be protected by demand for health products and services

Local summary: Bradford's economy is more resilient in the short term, Wakefield is expected to be more vulnerable to the longer term

# Modelling approach to quantify local economic impacts of Covid-19

## Sector level analysis

- Identify sectors which are vulnerable to Covid-19 pandemic and the suppression measures
- Sectoral analysis related to the Government's policy response
- Sector performance when the UK emerges from lockdown and begins to reopen its economy
- Short to medium term impacts of Covid-19 pandemic

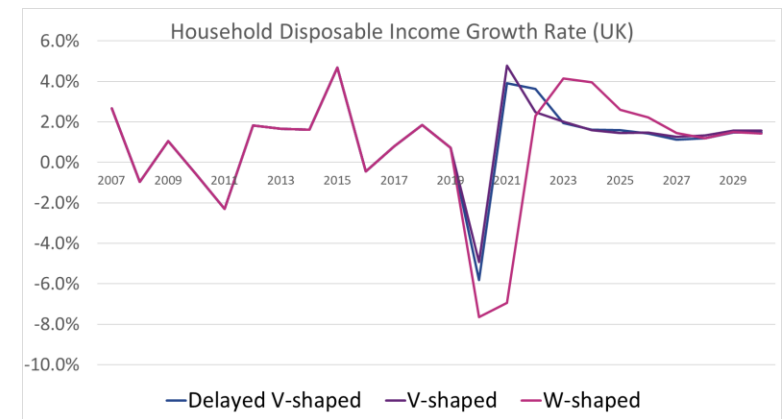
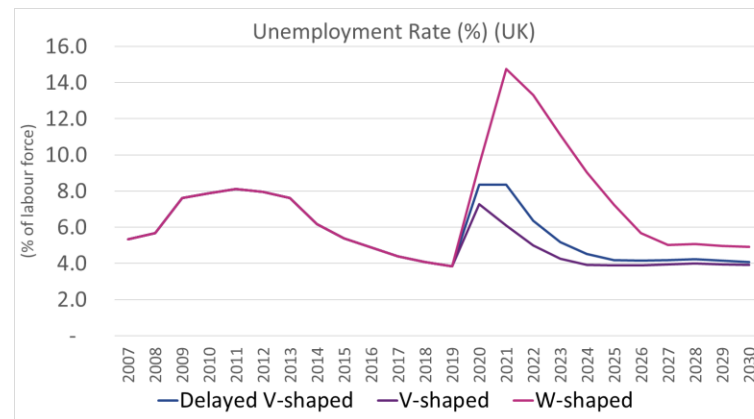
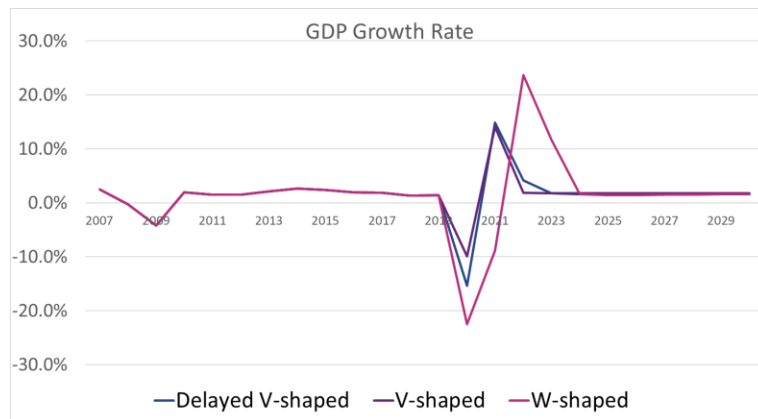
## UK Macro Scenario

## Local impacts

- Analyse the economic resilience of local area facing Covid-19 pandemic across key components including local economic and labour market structure
- Factor in longer term trends and historic relationships

# Scenario Results Comparisons - UK

	GDP growth	Unemployment rate	Real disposable household incomes	Employment growth
<b>1</b> <b>V-Shape</b>	2020: -9.9% 2021: +14.1%	2020: 7.3% 2021: 6.1%	2020: -4.9% 2021: +4.8%	2020: -2.6% 2021: +1.4%
<b>2</b> <b>Delayed V-Shape</b>	2020: -15.4% 2021: +14.9%	2020: 8.3% 2021: 8.3%	2020: -5.8% 2021: +3.9%	2020: -3.7% 2021: +0.2%
<b>3</b> <b>W-Shape</b>	2020: -22.5% 2021: -8.9%	2020: 9.5% 2021: 14.7%	2020: -7.7% 2021: -6.9%	2020: -5.0% 2021: -6.0%



Source: Experian

# Key local information

**Sector composition:** As the economic impacts of Covid-19 are filtered down to the local area level, there are a number of factors to consider when thinking about the scale and duration. A key contributing factor is the sectoral makeup of each area. The below table outlines the proportion of GVA concentrated in each sector. The colour scale shows which locals have more or less of a presence of a particular industry. If the cell is green, this shows it the industry has a large presence in the local area and red shows it has less of a presence. This is crucial as if an area has a large presence of a particularly vulnerable sector, this could result in a more harsh impact.

	Bradford	Calderdale	Kirklees	Leeds	Wakefield	WY	YH	UK
Agriculture, Forestry & Fishing	0.0	0.1	0.3	0.0	0.1	0.1	0.8	0.6
Extraction & Mining	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.7
Manufacturing	14.9	21.8	25.2	6.4	15.4	12.9	14.2	10.0
Utilities	5.5	0.6	1.1	5.0	3.7	4.0	3.3	2.6
Construction	4.0	4.7	6.5	5.5	8.4	5.7	6.1	6.3
Wholesale	5.0	4.9	4.9	5.1	6.9	5.3	5.6	5.4
Retail	7.5	4.9	8.2	4.8	6.1	5.9	6.0	5.4
Land Transport, Storage & Post	3.7	2.7	4.5	3.6	7.7	4.2	4.4	3.6
Air & Water Transport	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.6
Accommodation & Food Services	2.0	2.2	2.2	2.1	2.3	2.1	2.7	2.9
Recreation	1.0	0.9	1.7	1.9	0.9	1.5	1.3	1.6
Media Activities	1.2	0.5	0.5	1.0	0.2	0.8	0.6	1.9
Telecoms	1.2	0.3	0.3	3.9	1.2	2.3	1.7	1.7
Computing & Information Services	1.2	1.9	1.8	3.9	1.2	2.6	2.0	3.6
Finance	3.2	14.0	0.4	8.6	0.6	6.0	4.1	5.1
Insurance & Pensions	0.0	4.8	0.0	1.2	0.0	1.0	0.7	1.5
Real Estate	13.1	10.0	12.8	9.8	12.7	11.2	12.0	13.4
Professional Services	7.0	2.7	3.4	8.9	3.2	6.5	5.5	8.0
Admin. & Supportive Services	2.5	3.1	3.8	7.4	5.0	5.4	5.1	5.3
Other Private Services	0.9	2.8	1.0	2.2	1.0	1.7	1.7	1.9
Public Administration & Defence	6.3	4.4	4.7	3.8	8.0	5.0	5.2	4.8
Education	8.9	6.4	8.4	6.3	6.1	7.0	7.6	5.7
Health	7.2	4.0	5.4	4.8	7.0	5.5	5.8	5.1
Residential Care & Social Work	3.3	1.6	2.3	3.2	1.8	2.8	3.1	2.3

# Key local information

**Occupation mix:** The working patterns across the UK have changed dramatically and for some occupations, working from home is a viable arrangement, while for other occupations this is impossible. When looking at the occupation mix across the UK you can build up a picture of if there are opportunities or vulnerabilities in terms of remote working.

The table below outlines the proportion of employment focused in each occupation. The colour scale shows the concentration of occupations within a local area. If the cell is green it shows a high concentration of an occupation and red has a low representation. The first three occupations are deemed to have a greater ability to remotely work. Across the locals in question, Leeds and Sheffield have the highest proportion in these occupation and are more concentrated than the UK average.

	Bradford	Calderdale	Kirklees	Leeds	Wakefield	WY	YH	UK
Managers, directors and senior officials	8.7	12	10	8.9	6.7	9	10.1	11.3
Professional occupations	16.9	19.8	19.8	23.2	15.9	19.9	19.3	21.3
Associate prof & tech occupations	12.4	14.7	14.3	16.2	13.1	14.5	13.7	14.5
Administrative and secretarial occupations	6.3	11.3	10.2	8.2	9.4	8.7	9	9.6
Skilled trades occupations	11.1	8.8	10.9	9.1	11.7	10.2	10.3	10.1
Caring, leisure and other service occupations	11.1	11.9	7.9	9.1	9.6	9.6	9.8	9.1
Sales and customer service occupations	11.9	6.6	9	7.6	9.8	9	8.5	7.3
Process, plant and machine operatives	10.3	6.4	7.4	5.4	9.4	7.5	7.5	6.2
Elementary occupations	10.5	7.9	9.9	11.5	13.9	11	11.5	10.2

Source: ONS, NOMIS

# Key local information

**Household groups:** The mix of household groups is also an interesting viewpoint to review. This analysis draws on Experian's FSS (Financial Strategy Segment) segmentation tool, which utilises demographic information to split the UK population into a set of broad and detailed groups. It uses socio-demographic characteristics such as age, affluence, property tenure type and credit history to classify households into groups. The dataset below outlines how the groups are distributed across the local areas. If the cell is green it shows that this group is well represented in the local area, red shows a low concentration. This is crucial as if an area has a large presence of a particularly vulnerable household group, this could result in a more harsh impact. When we have analysed the Covid-19 impacts across the different household groups, the most at risk groups are L:Cash Economy, E: Family Pressures, A: Earning Potential and D: Deal Seekers.

	Bradford	Calderdale	Kirklees	Leeds	Wakefield	WY	UK
A : Earning Potential	8.2	8.8	8.5	15.2	10.4	10.9	7.9
B : Money Makers	3.7	4.5	4.3	9.7	3.2	5.7	8.6
C : Growth Phase	4.4	5.3	6.0	5.4	5.3	5.3	6.3
D : Deal Seekers	4.1	2.8	3.6	3.8	5.6	4.0	4.1
E : Family Pressures	15.4	5.8	9.2	8.2	6.7	9.6	5.2
F : Established Investors	5.7	7.5	6.5	6.5	3.0	5.9	10.5
G : Career Experience	4.5	7.5	6.3	5.6	3.3	5.4	5.5
H : Small-scale Savers	5.4	8.2	5.9	3.6	5.9	5.4	3.2
I : Mutual Resources	11.5	4.4	6.0	2.5	2.5	5.5	7.4
J : Single Earners	12.5	18.8	14.1	10.4	13.3	13.0	9.8
K : Respectable Reserves	6.5	7.9	9.7	8.2	12.0	8.6	8.2
L : Cash Economy	5.9	4.4	6.6	8.3	14.9	7.9	7.0
M : Golden Age	3.4	3.9	3.3	3.6	2.4	3.4	7.6
N : Home-equity Elders	3.8	4.5	5.1	4.7	6.2	4.8	4.0
O : Declining Years	4.8	5.6	4.8	4.2	5.3	4.8	4.6

Affluence	Age				
	V Young	Young	Middle	Old	V Old
V High			F		
High		B	G		M
Middle	C		H	K	N
Low	A	D	I		O
V Low	E	J	L		

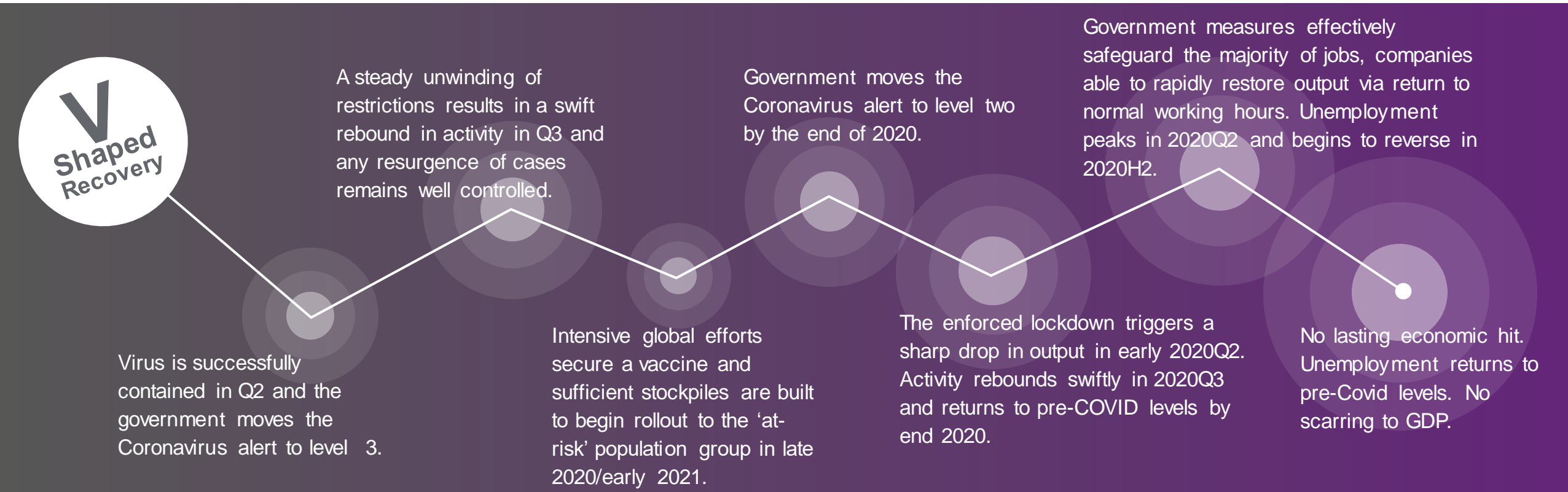
The above FSS matrix sets out the groups we classify and the shading shows household income, with purple being the highest and blue the lowest.

# Key local information - summary

	Sector composition (%)		Occupation profile (%)		FSS profile (%)
	Most impacted	Least impacted	Higher occupation groups	Lower occupation groups	Vulnerable household groups
Bradford	14.8	13.6	25.6	32.7	29.6
Calderdale	11.6	9.0	31.8	20.9	19.0
Kirklees	18.0	10.2	29.8	26.3	24.3
Leeds	12.9	14.2	32.1	24.5	31.7
Wakefield	17.5	16.5	22.6	33.1	31.9
WY	14.4	13.4	28.9	27.5	28.4
YH	15.2	14.0	29.4	27.5	25.7
UK	15.4	13.5	32.6	23.7	20.2

# Scenario 1: V-shape recovery – key assumptions

The following sets out a scenario narrative for a ‘V-shaped recovery’:



Government’s support packages and a V-shaped economic recovery result in minimal scarring effects to the UK’s longer term economic potential. The assumption is that the current mix of fiscal and monetary packages will continue for as long as needed and the unwind will be tapered to avoid potential cliff-edges which could disrupt the recovery. No additional measures above what has been already announced have been explicitly factored in.

# Scenario 1 V-shape recovery – UK results

**GDP:** As suppression policies are unwound, well contained virus cases and a swift bounce back in confidence help to support a fast paced recovery. A sharp reduction in output in 2020Q2 is followed by an rapid V-shaped rebound that begins in 2020Q3 and, in line with the OBR's reference scenario assumption, returns activity to pre-Covid levels by the end of 2020. The economy contracts by 9.9% in 2021, followed by a rebound of 14% in 2021. There is no long term scarring to output.

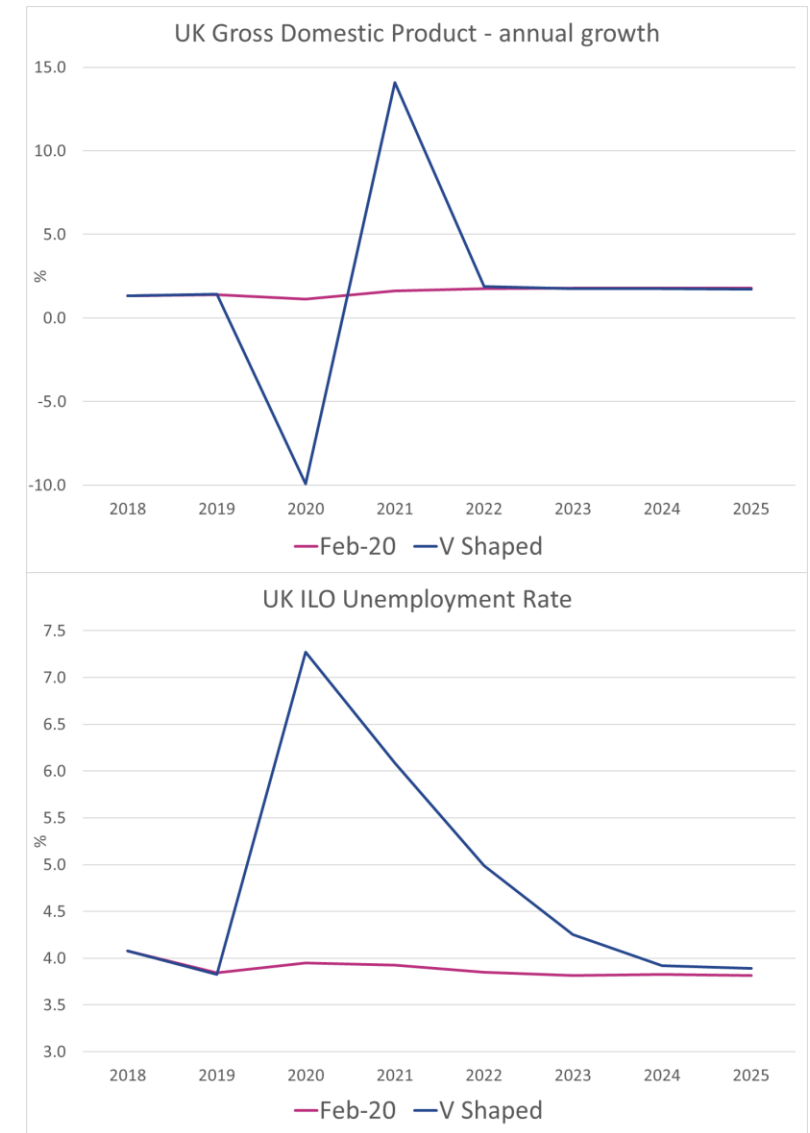
**Consumer demand** rebounds swiftly in 2020Q3 as retail, leisure and hospitality businesses reopen. Alongside this confidence is buoyed as incomes begin to gain from furloughed workers returning to work and a resumption in employment growth in the second half of the year. The drop in real household incomes is limited to 4% in 2020, followed by a strong rebound in 2021. Consumer spending recovers to pre-Covid levels by the end of 2020.

**Investment** drops abruptly during the lockdown in 2020Q2. However, the relatively short period within which the crisis is contained, together with government support, helps to limit the damage to company balance sheets and confidence. This leaves businesses better positioned to restore investment plans over the second half of the year as economic conditions improve. Private sector investment returns to pre-Covid levels in 2021H1.

**Labour Market:** The unemployment rate jumps to 9.7% in 2020Q2 as business react to the challenges of lockdown. This proves to be the peak as economic conditions improve in 2020Q3 but unemployment lags the rebound in GDP. Around a quarter of the rise in unemployment unwinds in 2020Q3 and 2020Q4. Beyond this the reduction is more gradual. The unemployment rate falls to 7% by end-2020 and below 6% by mid-2021. The swift turnaround in economic conditions means all furloughed staff return to employment and there is no rise in structural unemployment.

**International Trade:** The UK's trade partners are assumed to also reopen successfully over 2020H2, triggering a rise in global demand and an easing in supply chain issues. This enables exports to bounceback rapidly from the severe contraction in 2020Q2. Alongside this, imports enjoy a sharp improvement in line with the pick up in domestic demand.

**Productivity** suffers during the lockdown as output falls more than employment and hours worked. Changes in working patterns and supply chain disruptions also exert a drag. These impacts quickly reverse as the recovery sets in. The successful resolution to the crisis in a relatively short period prevents any lasting impact to productivity.



Source: Experian

# Scenario 1 V-shape recovery – sector results

## Highlights

### Most impacted :

**Retail, Accommodation, Transport, Recreation and Transport Equipment** are particularly exposed to the drop in social consumption and closure of non-essential businesses during full lockdown. In addition, transport equipment manufacturers are very vulnerable to supply chain disruptions and the drop in demand for motor vehicles.

This group initially takes longer to recover – returning to pre-Covid levels in 2021H2 compared with 2020Q4 for the overall economy – but catch up over the medium term as more typical trends reassert. Transport equipment reverts back to its position as one of the strongest performing manufacturing sectors. Output scarring over the long term is minimal.

### Least impacted:

**Health and Pharmaceuticals** output is boosted by greater demand for health products and services during the escalation in Covid cases. There is a correction lower once the health crisis turns a corner. The pace of expansion in the long term is little changed.

**Telecoms, Computing and Information Services** gain from greater spending on technology related to the shift to home working and online activities during lockdown. Maintain position as one of the stronger performers over the long term.

**Agriculture and Food Production** benefits in the short term as spending on essential products such as food is less sensitive to the squeeze on household incomes. Output then corrects back to more modest trends typical for this group.

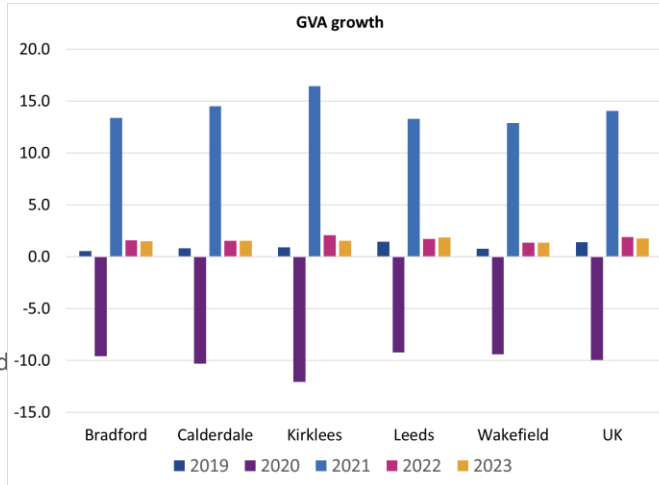
	GVA growth				
	2019	2020	2021	2022	2023
Agriculture, Forestry & Fishing	-1.1%	6.9%	-5.6%	-0.5%	0.2%
Extraction & Mining	-0.2%	-21.3%	25.3%	1.5%	-1.1%
Food, Drink & Tobacco	1.3%	4.7%	-3.4%	-0.8%	-0.1%
Textiles & Clothing	-1.8%	-20.2%	25.7%	0.2%	-0.6%
Wood & Paper	-1.8%	-11.8%	13.9%	-1.7%	-1.4%
Printing and RR Media	-0.6%	-15.5%	15.5%	-1.7%	-1.4%
Fuel Refining	-0.1%	-9.1%	2.8%	-1.6%	-1.3%
Chemicals	-2.5%	5.8%	-5.3%	-0.3%	0.0%
Pharmaceuticals	5.6%	9.3%	1.9%	1.3%	1.6%
Non-Metallic Products	-3.6%	-13.4%	16.9%	0.5%	0.6%
Metal Products	-0.3%	-12.1%	15.6%	-0.1%	0.2%
Computer & Electronic Products	0.7%	-12.6%	14.1%	0.1%	0.5%
Machinery & Equipment	-6.7%	-22.5%	28.7%	2.7%	1.4%
Transport Equipment	-6.4%	-32.0%	45.6%	7.4%	1.8%
Other Manufacturing	-2.9%	-18.8%	22.3%	1.2%	0.3%
Utilities	-0.7%	-5.7%	7.6%	0.4%	0.8%
Construction of Buildings	2.4%	-13.9%	19.3%	1.3%	1.7%
Civil Engineering	2.4%	-13.9%	19.3%	1.2%	1.6%
Specialised Construction Activities	2.4%	-13.9%	19.5%	1.4%	1.7%
Wholesale	2.9%	-16.7%	23.1%	1.9%	1.6%
Retail	3.0%	-27.9%	35.8%	6.4%	1.7%
Land Transport, Storage & Post	3.0%	-12.0%	17.2%	1.8%	2.1%
Air & Water Transport	-1.2%	-30.9%	39.6%	6.9%	2.0%
Accommodation & Food Services	2.1%	-34.7%	41.8%	10.9%	1.5%
Recreation	0.7%	-33.3%	40.0%	11.6%	2.0%
Media Activities	6.1%	-2.5%	11.5%	0.8%	1.8%
Telecoms	-2.0%	-2.9%	8.9%	1.1%	2.6%
Computing & Information Services	9.3%	-2.4%	10.0%	1.1%	2.3%
Finance	-3.0%	-4.4%	11.8%	1.5%	3.2%
Insurance & Pensions	-3.2%	-8.1%	10.1%	-0.2%	0.3%
Real Estate	0.6%	-8.8%	13.4%	0.7%	1.5%
Professional Services	2.4%	-4.2%	8.4%	0.8%	2.1%
Admin & Supportive Services	3.0%	-6.4%	11.2%	1.2%	2.8%
Other Private Services	-1.6%	-11.5%	18.1%	0.4%	1.0%
Public Administration & Defence	2.1%	2.0%	-0.5%	-0.2%	0.2%
Education	2.7%	-19.8%	21.2%	2.9%	2.5%
Health	1.7%	8.5%	7.1%	2.0%	3.3%
Residential Care & Social Work	1.9%	5.8%	-2.3%	2.5%	1.9%

The colour code in the accompanying table outlines how sectors will fare in each year. The dark red illustrates the weakest sectors in that particular year and the lighter shade reveals the stronger sectors. For example, in 2020 the accommodation and food service sector is expected to be the weakest sector and therefore has the darkest shade of red. At the other end of the scale, we expect growth to be strongest in 2020 is the pharmaceuticals sector.

# Scenario 1 V-shape recovery – Local results

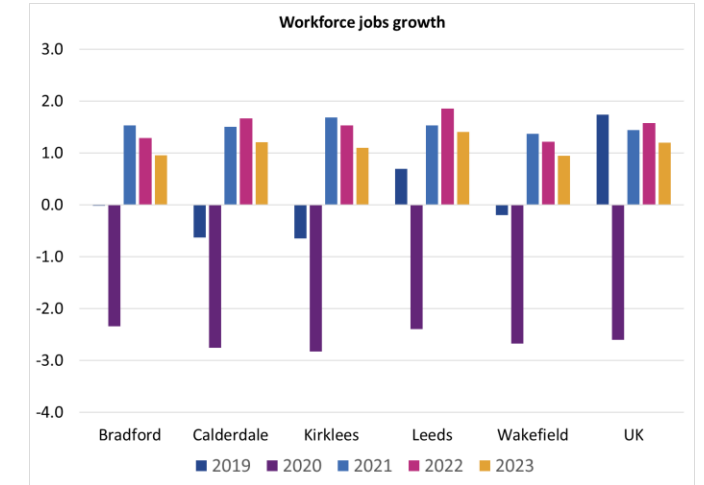
## GVA

Within West Yorkshire, we expect Kirklees to be one of the hard hit area in term of GVA growth while Leeds is slightly less impacted. All areas are likely to experience a dramatic knock to growth with most areas close to a double digits decline in output from -9.2% in Leeds to -12% in Kirklees. The UK economy will return to normality in 2021, led by stronger rebound from the most affected sectors during the lockdown, which is expected to boost GVA growth in Kirklees and Calderdale slightly above the UK averages.



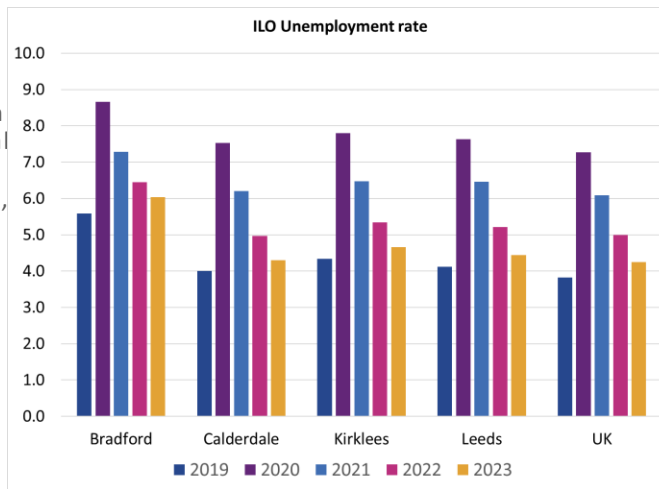
## Workforce jobs

Job growth across West Yorkshire had been weak prior to the Covid19 pandemic and sees a further decline in employment this year. Calderdale and Kirklees are expected to be worst hit in terms of jobs growth, at -2.8% this year. Leeds is likely to weather the storm better than most in part supported by larger public sector and a favourable occupation profile. The health sector at the UK level is expected to marginally increase employment this year, and such trends will help aid areas with notably larger presence of health and the wider public sector.



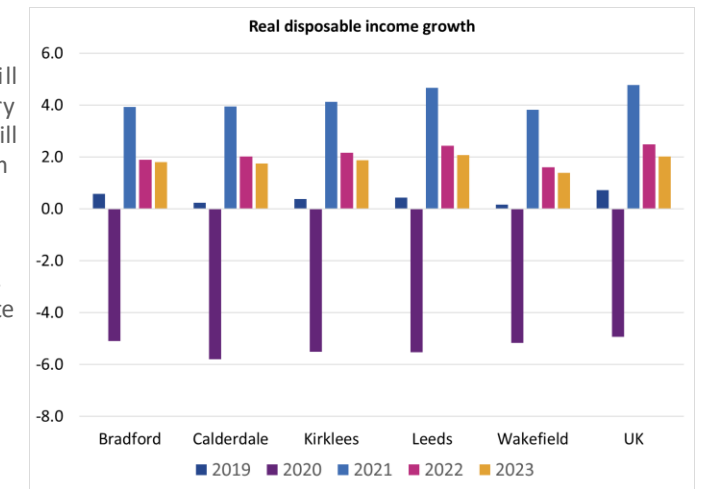
## Unemployment

Unemployment rates at the UK level are expected to rise from 3.8% in 2019 to 7.3% in 2020. The combination of government's fiscal and monetary support is preventing masses of unemployment and business bankruptcies, which provides the basis for full economic recovery. Unemployment rates are expected to be highest in Bradford this year, averaged 8.7% followed by Kirklees at 7.8% and these two areas also expected to have the biggest fall in unemployment in 2021 aided by sharp rebound in the sectors most impacted by the Covid pandemic.



## Incomes

The performance of household incomes will be a key factor of how durable the recovery will be when it finally emerges. Incomes will suffer a squeeze in the months ahead from a combination of a sharp rise in unemployment, furloughed workers and weakening wages. This scenario assumes incomes return to recovery later this year. The drop in incomes is likely to be felt quite uniformly across the locals. Bradford and Leeds may fare a little better, in part explained by a lower implied rate of furlough and the large public sector presence.



# Scenario 1 V-shape recovery – Local results

Annual GVA growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-9.6	13.4	1.6	1.5	1.5	1.5
Calderdale	0.8	-10.3	14.5	1.5	1.5	1.5	1.4
Kirklees	0.9	-12.0	16.4	2.1	1.5	1.5	1.5
Leeds	1.5	-9.2	13.3	1.7	1.8	1.8	1.8
Wakefield	0.8	-9.4	12.9	1.4	1.3	1.4	1.4
YH	0.9	-9.8	13.6	1.7	1.5	1.5	1.5
UK	1.4	-9.9	14.1	1.9	1.8	1.7	1.7

Annual workforce jobs growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.0	-2.3	1.5	1.3	1.0	0.8	0.7
Calderdale	-0.6	-2.8	1.5	1.7	1.2	0.9	0.8
Kirklees	-0.6	-2.8	1.7	1.5	1.1	0.8	0.7
Leeds	0.7	-2.4	1.5	1.9	1.4	1.1	1.0
Wakefield	-0.2	-2.7	1.4	1.2	0.9	0.7	0.6
YH	-0.2	-2.5	1.5	1.5	1.1	0.8	0.7
UK	1.7	-2.6	1.4	1.6	1.2	0.9	0.8

ILO unemployment rate (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	5.6	8.7	7.3	6.4	6.0	5.8	5.6
Calderdale	4.0	7.5	6.2	5.0	4.3	3.9	3.6
Kirklees	4.3	7.8	6.5	5.3	4.7	4.3	4.1
Leeds	4.1	7.6	6.5	5.2	4.4	4.1	3.9
Wakefield	4.6	7.7	6.4	5.4	4.8	4.4	4.2
YH	4.4	7.6	6.3	5.2	4.5	4.1	3.9
UK	3.8	7.3	6.1	5.0	4.3	3.9	3.9

Real incomes growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-5.1	3.9	1.9	1.8	1.6	1.6
Calderdale	0.2	-5.8	3.9	2.0	1.7	1.4	1.3
Kirklees	0.4	-5.5	4.1	2.2	1.9	1.5	1.5
Leeds	0.4	-5.5	4.7	2.4	2.1	1.7	1.6
Wakefield	0.2	-5.2	3.8	1.6	1.4	1.1	1.1
YH	0.4	-5.2	4.3	2.2	1.9	1.5	1.4
UK	0.7	-4.9	4.8	2.5	2.0	1.6	1.5

Source: Experian

# Scenario 2: Delayed V-shaped recovery – key assumptions

The following sets out a scenario narrative for a ‘Delayed-V shaped recovery’:



The rebound in activity from the unwind of suppression measures is initially gradual, but gathers pace from late 2020Q3 and the resurgence of cases remains controlled.

Government moves the Coronavirus alert to level two during 2021.

Government support measures not as effective as in case 1 due to slower recovery, resulting in a greater squeeze to household and business finances. Unemployment peaks in 2020Q3 and remains elevated into 2021.

Virus is successfully contained in 2020Q2 and the government moves the Coronavirus alert to level 3.

Intensive global efforts secure a vaccine and sufficient stockpiles are built to begin rollout to the ‘at-risk’ population group in 2021H1.

The enforced lockdown triggers a sharp drop in output in early 2020Q2. Activity recovers slowly in 2020Q3 but gathers momentum in 2020Q4. Output returns to pre-COVID levels in 2022.

The delayed recovery intensifies the short term pain and results in modest long term scarring to GDP and unemployment.

Government’s support packages and a delayed V-shaped economic recovery help to limit scarring effects to the UK’s longer term economic potential. The assumption is that the current mix of fiscal and monetary packages will continue for as long as needed and the unwind will be tapered to avoid potential cliff-edges which could disrupt the recovery. No additional measures above what has been already announced have been explicitly factored in.

# Scenario 2 Delayed V recovery– UK results

**GDP:** Suppression policies and the associated enforced lockdown triggers a sharp drop in output in 2020Q2 as non-essential businesses and activities temporarily close. As restrictions are eased gradually, the economic recovery is modest in 2020Q3 but picks up momentum by 2020Q4. The economy is expected to contract around 15% in 2020 followed by a sharp rebound in 2021. Output returns to pre-Covid levels by early 2022.

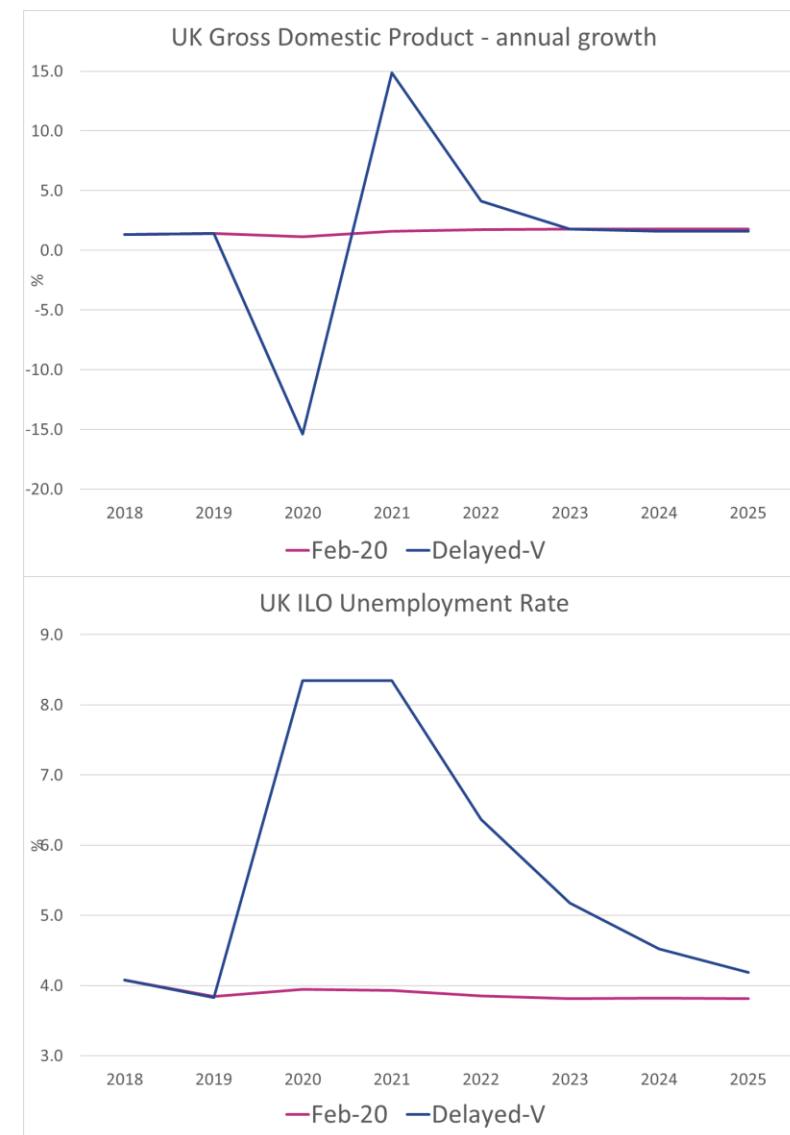
**Consumer demand** suffers as social distancing, squeezed incomes and low confidence trigger a big drop in discretionary spending in 2020Q2 and weigh on the emerging recovery in 2020Q3. Household incomes fall by 5% in 2020 from a combination of higher unemployment, weaker wage growth and furloughing. Sales of some essential items rise sharply over this period due to stockpiling, but this is not sufficient to offset the decline in other areas, leading to an overall fall in spending. The recovery picks up momentum in 2020Q4, but consumer spending does not return to pre-Covid levels until the second half of 2022.

**Investment** declines as hits to business confidence and financial positions leads to the postponement/cancellation of projects. The recovery will lag behind other areas as companies emerge from the recession focused on repairing weakened balance sheets. A return to pre-Covid levels is delayed until late 2023.

**Labour Market:** UK government's response to the economic threat from the Covid-19 crisis has been aimed at helping companies of all sizes retain staff and prevent insolvencies. These measures help rein in the rate of job shedding as staff as furloughed instead. The unemployment rate rises above 9% in 2020 and remains elevated in 2021, before gradually falling below 6% in 2022.

**International Trade:** Exports are undermined by a fall in international demand for UK goods and services, as other countries also enforce lockdown measures against the pandemic. Supply side factors reinforce this trend, such as the temporary closure of factories and businesses and disruptions to supply chains. Imports mirror these trends.

**Productivity** falls in the short term due to supply chains disruptions and changes in working patterns (over 40% of employees working from home). It recovers back to previous levels once conditions normalize. Longer term impacts related to the drop in investment are relatively mild. Hence, GDP scarring is modest.



Source: Experian



# Scenario 2 Delayed V recovery – sector results

## Highlights

### Most impacted :

**Retail, Accommodation, Transport, Recreation and Transport Equipment** suffer the most from the drop in social consumption and closure of non-essential businesses during full lockdown.

This group of businesses also take longer to return to pre-Covid levels during the recovery phase, between 1 -2 years later than the overall economy. There is a partial catch up in output levels, with relatively higher levels of scarring over the long term: between 5-8% by 2030, compared to 4% for the UK overall.

### Least impacted:

**Health and Pharmaceuticals** output is boosted temporarily by greater demand for health products and services. The stand out performer is Pharmaceuticals, which remains on a growth trajectory throughout the forecast. The long term growth outlook is unaffected.

**Telecoms, Computing and Information Services** gain from higher spending on technology related to the shift to home working and online activities. These sectors return to pre-Covid levels in 2021, slight ahead of the UK average.

**Agriculture and Food Production** benefit as spending on essential products such as food is less sensitive to the squeeze on household incomes during the crisis. Output then corrects back to more modest trends typical for this group.

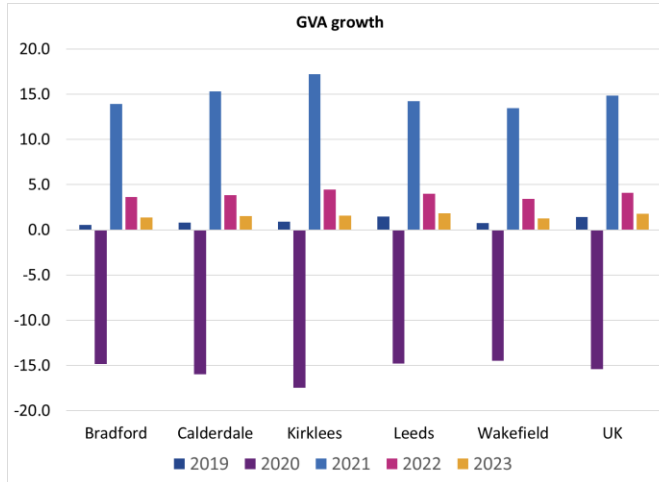
	GVA growth				
	2019	2020	2021	2022	2023
Agriculture, Forestry & Fishing	-1.1%	5.8%	-5.3%	-0.2%	0.2%
Extraction & Mining	-0.2%	-27.1%	27.7%	4.3%	-1.1%
Food, Drink & Tobacco	1.3%	3.0%	-2.1%	-0.2%	-0.1%
Textiles & Clothing	-1.8%	-26.2%	28.3%	2.9%	-0.6%
Wood & Paper	-1.8%	-18.3%	16.1%	1.0%	-1.4%
Printing and RR Media	-0.6%	-21.9%	17.9%	1.1%	-1.4%
Fuel Refining	-0.1%	-13.4%	5.1%	-0.1%	-1.3%
Chemicals	-2.5%	4.1%	-4.1%	0.2%	0.0%
Pharmaceuticals	5.6%	7.6%	3.2%	1.8%	1.6%
Non-Metallic Products	-3.6%	-19.8%	19.1%	3.3%	0.6%
Metal Products	-0.3%	-18.7%	17.9%	2.6%	0.2%
Computer & Electronic Products	0.7%	-19.0%	17.6%	2.8%	0.5%
Machinery & Equipment	-6.7%	-28.3%	29.5%	5.1%	1.4%
Transport Equipment	-6.4%	-38.6%	43.7%	10.3%	1.8%
Other Manufacturing	-2.9%	-24.8%	24.2%	3.9%	0.3%
Utilities	-0.7%	-11.5%	11.4%	2.3%	0.8%
Construction of Buildings	2.4%	-20.5%	19.9%	4.1%	1.7%
Civil Engineering	2.4%	-20.5%	19.8%	4.0%	1.6%
Specialised Construction Activities	2.4%	-20.5%	20.0%	4.1%	1.7%
Wholesale	2.9%	-22.9%	25.5%	4.6%	1.6%
Retail	3.0%	-32.9%	34.0%	9.3%	1.7%
Land Transport, Storage & Post	3.0%	-18.6%	19.5%	4.6%	2.1%
Air & Water Transport	-1.2%	-35.9%	39.4%	9.4%	2.0%
Accommodation & Food Services	2.1%	-39.4%	42.7%	13.8%	1.5%
Recreation	0.7%	-38.0%	38.0%	14.0%	2.0%
Media Activities	6.1%	-9.4%	12.1%	3.2%	1.8%
Telecoms	-2.0%	-9.3%	10.2%	3.4%	2.6%
Computing & Information Services	9.3%	-8.8%	11.5%	3.3%	2.3%
Finance	-3.0%	-11.4%	12.0%	3.7%	3.2%
Insurance & Pensions	-3.2%	-15.0%	11.0%	2.1%	0.3%
Real Estate	0.6%	-15.6%	14.6%	3.1%	1.5%
Professional Services	2.4%	-10.8%	10.8%	3.2%	2.1%
Admin & Supportive Services	3.0%	-12.1%	13.2%	3.5%	2.8%
Other Private Services	-1.6%	-18.0%	21.0%	3.1%	1.0%
Public Administration & Defence	2.1%	1.0%	0.2%	0.3%	0.2%
Education	2.7%	-25.6%	23.3%	5.7%	2.5%
Health	1.7%	6.5%	3.0%	4.8%	3.3%
Residential Care & Social Work	1.9%	4.2%	-1.0%	3.0%	1.9%

The colour code in the accompanying table outlines how sectors will fare in each year. The dark red illustrates the weakest sectors in that particular year and the lighter shade reveals the stronger sectors. For example, in 2020 the accommodation and food service sector is expected to be the weakest sector and therefore has the darkest shade of red. At the other end of the scale, we expect growth to be strongest in 2020 is the pharmaceuticals sector.

# Scenario 2 Delayed V recovery – Local results

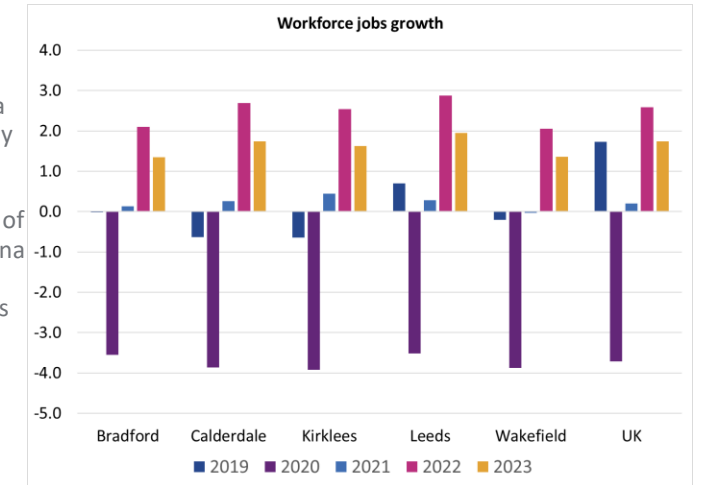
## GVA

GVA growth across West Yorkshire is likely to be severely impacted by the Covid pandemic and the enforced lockdown. However, its diverse economy base means each local authority faces varying degrees of adverse economic challenges. Bradford, Leeds and Wakefield are expected to fare slightly better than the region as a whole while Kirklees' economy has the highest exposure to most impacted sectors and therefore the hardest hit area. We expect the GVA in all local districts within West Yorkshire to rebound strongly in 2021 and returns to pre-Covid level by 2022.



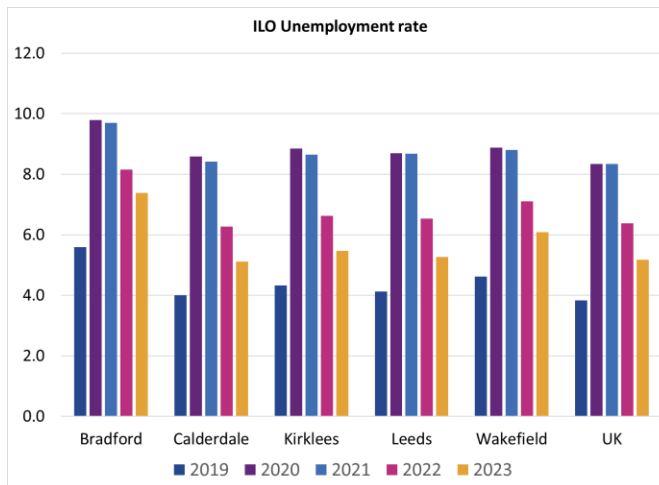
## Workforce jobs

Despite the severe contraction in output, employment has held up well as a result of a mixture of government's fiscal and monetary policies. Leeds is expected to fare slightly better than most because of its exposure to business services sector and close to a third of its workforce is in managerial and professional occupations with greater flexibility to work remotely. By 2021, the economic recovery is well underway, jobs creation is likely to be subdued at first as workers previously furloughed return to work, therefore we expect meaningful employment growth to start in 2022 led by Leeds and Calderdale.



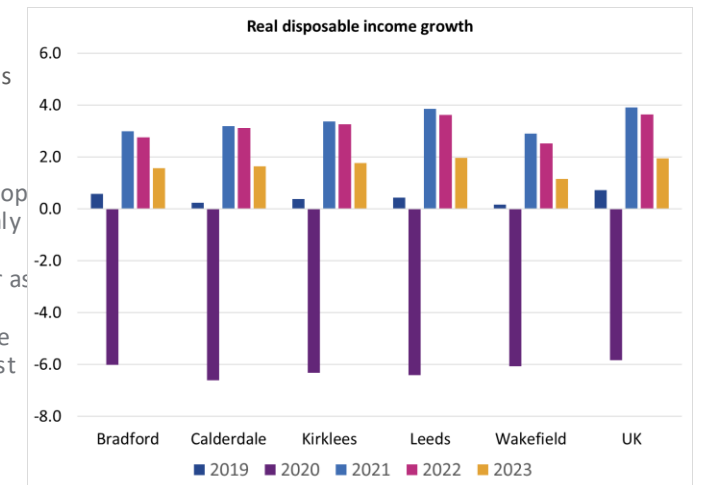
## Unemployment

Within West Yorkshire the unemployment is expected to be higher than the regional and national averages particularly in places like Bradford and Kirklees, and remain high through 2021 above the levels seen after the 2008-09 financial crisis. Calderdale and Leeds are expected to see unemployment fall more quickly boosted by employment gains in the services sectors, while Bradford and Wakefield lagging behind as a result of weak jobs growth.



## Incomes

Household income within West Yorkshire is likely to suffer steep fall of around 6% this year from a combination of higher unemployment, weaker wage growth and furloughing. Within West Yorkshire, the drop in incomes is likely to be felt quite uniformly across the area, Calderdale and Leeds are likely to see hardest hit in income this year as followed by a strong bounce back in 2021 while Wakefield may see persistent income growth in the next few years. Overall, most areas will see household income return to pre-Covid levels by late 2022.



# Scenario 2 Delayed V recovery – Local results summary

Annual GVA growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-14.8	13.9	3.6	1.4	1.3	1.4
Calderdale	0.8	-16.0	15.3	3.8	1.5	1.3	1.3
Kirklees	0.9	-17.5	17.2	4.4	1.5	1.3	1.4
Leeds	1.5	-14.8	14.2	4.0	1.8	1.6	1.7
Wakefield	0.8	-14.5	13.4	3.4	1.3	1.2	1.3
YH	0.9	-15.1	14.4	3.9	1.5	1.3	1.4
UK	1.4	-15.4	14.9	4.1	1.8	1.6	1.6

Annual workforce jobs growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.0	-3.6	0.1	2.1	1.3	1.0	0.8
Calderdale	-0.6	-3.9	0.3	2.7	1.7	1.2	0.9
Kirklees	-0.6	-3.9	0.4	2.5	1.6	1.1	0.8
Leeds	0.7	-3.5	0.3	2.9	2.0	1.4	1.0
Wakefield	-0.2	-3.9	0.0	2.1	1.4	0.9	0.7
YH	-0.2	-3.6	0.2	2.5	1.6	1.1	0.8
UK	1.7	-3.7	0.2	2.6	1.7	1.2	0.9

ILO unemployment rate (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	5.6	9.8	9.7	8.2	7.4	6.9	6.7
Calderdale	4.0	8.6	8.4	6.3	5.1	4.5	4.1
Kirklees	4.3	8.8	8.6	6.6	5.5	4.8	4.5
Leeds	4.1	8.7	8.7	6.5	5.3	4.6	4.3
Wakefield	4.6	8.9	8.8	7.1	6.1	5.5	5.3
YH	4.4	8.6	8.5	6.5	5.3	4.7	4.4
UK	3.8	8.3	8.3	6.4	5.2	4.5	4.2

Real incomes growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-6.0	3.0	2.8	1.6	1.6	1.7
Calderdale	0.2	-6.6	3.2	3.1	1.6	1.5	1.4
Kirklees	0.4	-6.3	3.4	3.3	1.8	1.6	1.6
Leeds	0.4	-6.4	3.9	3.6	2.0	1.7	1.7
Wakefield	0.2	-6.1	2.9	2.5	1.1	1.1	1.2
YH	0.4	-6.1	3.5	3.3	1.8	1.5	1.5
UK	0.7	-5.8	3.9	3.6	2.0	1.6	1.6

Source: Experian

# Scenario 3: W-shape recovery – key assumptions

The following sets out a scenario narrative for a ‘W-shaped recovery’:



This case starts in a similar way to case 2: the virus is contained in 2020Q2 and suppression measures begin to unwind.

The easing of restrictions is followed by an escalation in virus cases during the autumn, leading to a return to lockdown conditions in 2020Q4.

This is followed by a 12 month period of fluctuating easing and tightening of restrictions until a vaccine is finally in place at the end of 2021.

The second lockdown sends the economy back into recession, triggering a renewed wave of job losses.

Government support is extended but less generous and does not prevent an upward spike in job shedding and insolvencies.

Confidence is harder hit and takes longer to recover. Businesses are left with significantly greater debts and financial challenges than the other cases. Job creation and investment are subdued for longer.

Meaningful recovery postponed until 2022. Long period of stagnation results in greater long term effects on the economy.

Fiscal and monetary support measures are extended in this scenario, but the generosity of these schemes is reduced as government finances are increasingly stretched. These are insufficient to prevent a spike higher in unemployment and business insolvencies. Also, the reintroduction of austerity measures over the medium term will be a further constraint on the economic outlook. The protracted period of economic weakness leads to greater long term effects on the economy's growth potential.

# Scenario 3 W-shape recovery – UK results

**GDP:** A second lockdown leads to a sharp drop in GDP in 2020Q4. The reduction reflects the impact of the renewed closure of businesses, confidence impacts as business and households rein back spending, increased business insolvencies and further disruptions to supply chains. Social distancing measures and subdued confidence keep the recovery subdued until 2022. The economy does not return to pre-Covid levels until 2025.

**Consumer demand** falls again in 2020Q4 and the pattern of spending is similar to before with social consumption hit hard as non-essential businesses close and social distancing tightened. The combination of squeezed household incomes, stubbornly high unemployment and tepid confidence leaves households with limited ability or appetite for spending throughout 2021. A recovery in spending emerges from 2022 as restrictions ease and unemployment begins to fall.

**Investment** suffers as companies cash flows come under renewed stress. The confidence impacts are deeper and more long lasting than in the other scenarios. Surviving businesses are saddled with greater debts and focused on balance sheet repair. This leaves investment remains very subdued and the recovery that eventually emerges lags behind the rest of the economy.

**Labour Market:** The second lockdown triggers a renewed wave of job shedding and business insolvencies which push the unemployment rate up to 14%. Government measures to safeguard jobs are extended but companies are expected to make some contribution to the costs of furloughed employees. Unlike the other cases, not all furloughed staff return to employment. Unemployment remains elevated through 2021, leading to an rise in structural unemployment. The unemployment rate settles at around 5% over the long term.

**International Trade:** We assume the UK's export partners also suffer a second wave of virus cases and enact lockdown measures. Hence, trade would face a similar pattern of decline to 2020Q2, with both exports and imports falling markedly due to demand and supply side disruptions.

**Productivity** Economic stagnation and persistently weak investment over much of 2021 leads to greater long term effects on the economy's productive capacity. Potential GDP growth is 0.2 percentage points lower. The economy is around 10% lower in 2030 than levels forecast before the Covid crisis.



Source: Experian



# Scenario 3 W-shape recovery – sector results

## Highlights

### Most impacted :

**Retail, Accommodation, Transport and Recreation** endure the greatest losses in the short term due to drop in social consumption. These businesses take longer to return to pre-Covid levels during the recovery phase and suffer the greatest long term scarring.

**Construction and manufacturing** suffer from a scaling back in investment projects, supply chain disruptions and drop in domestic and external demand. The pace of recovery is also restricted by the protracted weakness in investment. This compounds already poor longer term prospects for some of these manufacturing sectors. Some of the weakness is offset by import substitution opportunities.

### Least impacted:

**Health and Pharmaceuticals** protected by demand for health products and services. Medium term growth in **Health**, along with the other public services, is curbed by government austerity measures.

**Telecoms, Computing and Information Services** hit less hard during the crisis period as spending on technology falls by less than on other products & services. Amongst the first to return to pre-Covid levels. Maintain position as one of the stronger performers over the long term.

**Agriculture and Food Production** suffers relatively less during 2021 as food spending holds up. Medium term growth prospects helped by import substitution.

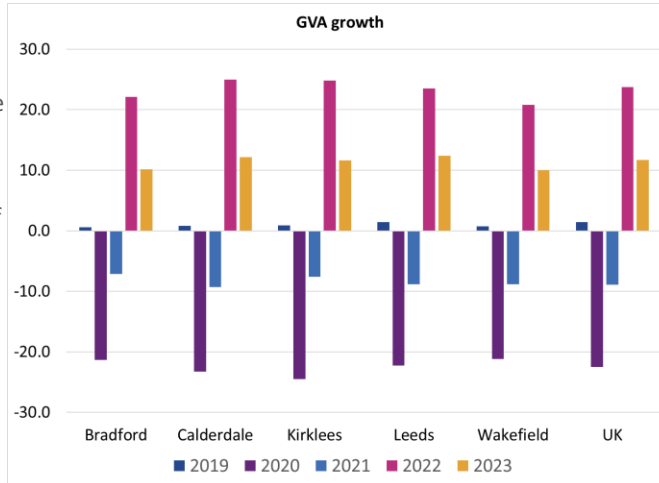
	GVA growth				
	2019	2020	2021	2022	2023
Agriculture, Forestry & Fishing	-1.1%	4.9%	-6.3%	0.3%	1.1%
Extraction & Mining	-0.2%	-34.8%	-5.2%	30.5%	11.9%
Food, Drink & Tobacco	1.3%	1.5%	-5.0%	2.6%	1.7%
Textiles & Clothing	-1.8%	-34.3%	-4.4%	28.8%	12.4%
Wood & Paper	-1.8%	-26.9%	-13.9%	26.5%	11.5%
Printing and RR Media	-0.6%	-30.2%	-12.4%	26.5%	11.5%
Fuel Refining	-0.1%	-22.5%	-22.2%	25.1%	11.6%
Chemicals	-2.5%	1.7%	-9.6%	4.7%	2.7%
Pharmaceuticals	5.6%	4.8%	-3.3%	6.4%	4.4%
Non-Metallic Products	-3.6%	-28.2%	-11.7%	29.3%	13.8%
Metal Products	-0.3%	-27.3%	-12.5%	28.5%	13.3%
Computer & Electronic Products	0.7%	-27.5%	-12.8%	28.8%	13.6%
Machinery & Equipment	-6.7%	-36.1%	-3.6%	31.5%	14.6%
Transport Equipment	-6.4%	-45.0%	6.6%	37.9%	15.0%
Other Manufacturing	-2.9%	-32.8%	-7.8%	30.1%	13.4%
Utilities	-0.7%	-20.8%	-17.5%	28.1%	13.9%
Construction of Buildings	2.4%	-29.0%	-10.9%	30.3%	14.9%
Civil Engineering	2.4%	-29.0%	-11.0%	30.2%	14.8%
Specialised Construction Activities	2.4%	-29.0%	-10.9%	30.4%	15.0%
Wholesale	2.9%	-31.2%	-6.7%	31.0%	14.8%
Retail	3.0%	-41.0%	-9.0%	42.3%	17.3%
Land Transport, Storage & Post	3.0%	-27.4%	-12.0%	31.0%	15.4%
Air & Water Transport	-1.2%	-42.6%	3.6%	36.8%	15.2%
Accommodation & Food Services	2.1%	-46.9%	-3.1%	47.8%	16.9%
Recreation	0.7%	-44.2%	2.0%	42.5%	15.3%
Media Activities	6.1%	-19.0%	-16.8%	29.3%	15.1%
Telecoms	-2.0%	-18.8%	-18.4%	29.6%	15.9%
Computing & Information Services	9.3%	-18.3%	-17.4%	29.4%	15.6%
Finance	-3.0%	-20.7%	-17.0%	29.9%	16.6%
Insurance & Pensions	-3.2%	-23.8%	-17.9%	27.9%	13.4%
Real Estate	0.6%	-24.4%	-15.1%	29.1%	14.7%
Professional Services	2.4%	-19.9%	-18.1%	29.3%	15.4%
Admin & Supportive Services	3.0%	-21.4%	-16.1%	29.7%	16.1%
Other Private Services	-1.6%	-27.0%	-10.1%	29.1%	14.1%
Public Administration & Defence	2.1%	0.6%	-0.6%	0.8%	0.0%
Education	2.7%	-31.4%	2.4%	28.6%	7.8%
Health	1.7%	5.2%	4.4%	6.2%	2.1%
Residential Care & Social Work	1.9%	2.4%	-2.3%	3.5%	1.3%

The colour code in the accompanying table outlines how sectors will fare in each year. The dark red illustrates the weakest sectors in that particular year and the lighter shade reveals the stronger sectors. For example, in 2020 the accommodation and food service sector is expected to be the weakest sector and therefore has the darkest shade of red. At the other end of the scale, we expect growth to be strongest in 2020 is the health sector.

# Scenario 3 W-shape recovery – Local results

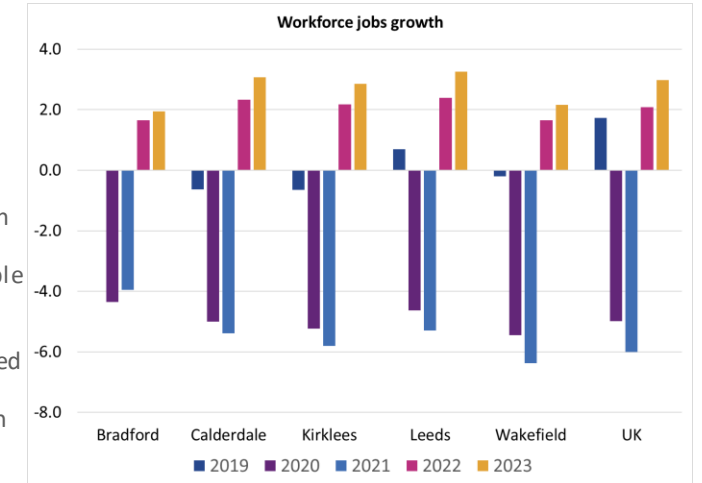
## GVA

A second lockdown leads to a sharp drop in GVA of more than 20% across West Yorkshire this year. In an area like Kirklees in which construction and manufacturing – the two sectors expected to be hit hardest in the second lockdown – accounts more for 30% of GVA is more exposed to scaling back in investment and therefore expected to suffer disproportionately worse than the rest. Economic recovery is likely to be more uneven across sectors due to varying scarring effects resulting from weakness in investment and disruptions in supply chain, which is likely to have more adverse impact in Kirklees.



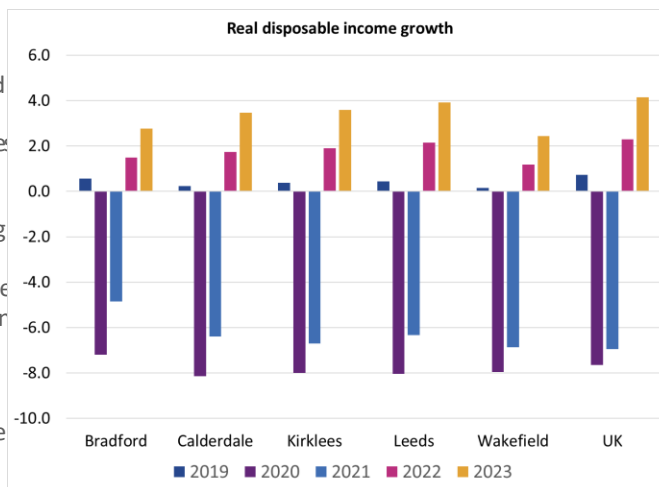
## Workforce jobs

The second lockdown triggers a renewed wave of job shedding and business insolvencies lead to significant job losses across West Yorkshire. Unlike the other cases, with less financial support from the government, not all furloughed staff return to employment and therefore areas with higher concentration of the most vulnerable sectors are likely to see permanent job losses range between 4.4% and 5.5% of employment in 2020. Wakefield is expected to have the largest job losses this year followed by Kirklees. Employment levels in most areas are unlikely to return to pre-Covid before 2026.



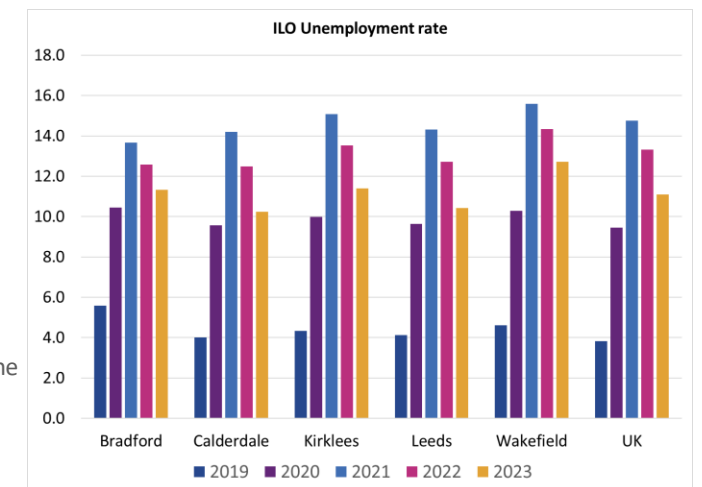
## Unemployment

The second lockdown triggers a second round of mass redundancies which push the unemployment rate more than 15% in Kirklees and Wakefield in 2021. Leeds and Calderdale are expected to fare better than most as business services sector is better placed during the crisis period as spending on technology and services has fallen less than others. Unlike the other cases, not all furloughed staff return to employment. Unemployment remains elevated through 2021, leading to a rise in structural unemployment; areas such as Bradford and Wakefield are more likely to see persistent high unemployment.



## Incomes

Household income is expected to suffer from a steep fall in 2020 and 2021 weight down by stubbornly high unemployment and lack of business confidence. In the short term, household income in Bradford appears to be more resilient. Once the economy recovery is firmly entrenched, a recovery in household income emerges from 2022 as restrictions ease and unemployment begins to fall we are expected to see stronger household income growth in Leeds and Calderdale.



# Scenario 3 W-shape recovery – Local results

Annual GVA growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-21.3	-7.1	22.1	10.2	0.8	0.9
Calderdale	0.8	-23.3	-9.3	25.0	12.1	1.3	1.1
Kirklees	0.9	-24.5	-7.6	24.8	11.6	1.3	1.2
Leeds	1.5	-22.2	-8.9	23.5	12.4	1.6	1.5
Wakefield	0.8	-21.2	-8.8	20.8	10.0	0.9	0.9
YH	0.9	-22.1	-8.9	23.2	11.2	1.3	1.2
UK	1.4	-22.5	-8.9	23.7	11.7	1.6	1.5

Annual workforce jobs growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.0	-4.4	-3.9	1.6	1.9	1.9	1.8
Calderdale	-0.6	-5.0	-5.4	2.3	3.1	2.8	2.4
Kirklees	-0.6	-5.2	-5.8	2.2	2.9	2.6	2.2
Leeds	0.7	-4.6	-5.3	2.4	3.3	3.0	2.6
Wakefield	-0.2	-5.5	-6.4	1.7	2.2	2.0	1.8
YH	-0.2	-4.9	-5.8	2.1	2.8	2.6	2.3
UK	1.7	-5.0	-6.0	2.1	3.0	2.8	2.4

ILO unemployment rate (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	5.6	10.4	13.7	12.6	11.3	10.1	9.0
Calderdale	4.0	9.6	14.2	12.5	10.2	8.2	6.5
Kirklees	4.3	10.0	15.1	13.5	11.4	9.5	7.9
Leeds	4.1	9.6	14.3	12.7	10.4	8.3	6.6
Wakefield	4.6	10.3	15.6	14.3	12.7	11.3	10.0
YH	4.4	9.7	14.7	13.2	11.1	9.2	7.6
UK	3.8	9.5	14.7	13.3	11.1	9.0	7.3

Real incomes growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	-7.2	-4.8	1.5	2.8	3.0	2.2
Calderdale	0.2	-8.1	-6.4	1.7	3.5	3.5	2.4
Kirklees	0.4	-8.0	-6.7	1.9	3.6	3.6	2.5
Leeds	0.4	-8.0	-6.3	2.2	3.9	3.9	2.7
Wakefield	0.2	-8.0	-6.9	1.2	2.4	2.6	1.9
YH	0.4	-7.8	-6.7	2.0	3.7	3.6	2.5
UK	0.7	-7.7	-6.9	2.3	4.1	4.0	2.6

Source: Experian

# Summary local results

	GDP			Unemployment Rate (%)			Income			Employment		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>V-Shape Scenario</b>												
Bradford	-10%	13%	2%	8.7	7.3	6.4	-5%	4%	2%	-2%	2%	1%
Calderdale	-10%	15%	2%	7.5	6.2	5.0	-6%	4%	2%	-3%	2%	2%
Kirklees	-12%	16%	2%	7.8	6.5	5.3	-6%	4%	2%	-3%	2%	2%
Leeds	-9%	13%	2%	7.6	6.5	5.2	-6%	5%	2%	-2%	2%	2%
Wakefield	-9%	13%	1%	7.7	6.4	5.4	-5%	4%	2%	-3%	1%	1%
<b>Delayed V Scenario</b>												
Bradford	-15%	14%	4%	9.8	9.7	8.2	-6%	3%	3%	-4%	0%	2%
Calderdale	-16%	15%	4%	8.6	8.4	6.3	-7%	3%	3%	-4%	0%	3%
Kirklees	-17%	17%	4%	8.8	8.6	6.6	-6%	3%	3%	-4%	0%	3%
Leeds	-15%	14%	4%	8.7	8.7	6.5	-6%	4%	4%	-4%	0%	3%
Wakefield	-14%	13%	3%	8.9	8.8	7.1	-6%	3%	3%	-4%	0%	2%
<b>W-Shape Scenario</b>												
Bradford	-21%	-7%	22%	10.4	13.7	12.6	-7%	-5%	1%	-4%	-4%	2%
Calderdale	-23%	-9%	25%	9.6	14.2	12.5	-8%	-6%	2%	-5%	-5%	2%
Kirklees	-25%	-8%	25%	10.0	15.1	13.5	-8%	-7%	2%	-5%	-6%	2%
Leeds	-22%	-9%	24%	9.6	14.3	12.7	-8%	-6%	2%	-5%	-5%	2%
Wakefield	-21%	-9%	21%	10.3	15.6	14.3	-8%	-7%	1%	-5%	-6%	2%

# Sensitivity analysis

The scenarios help to illustrate the channels through which the impact of Covid is felt across the economy. The variables highlighted below are the most important drivers of the outlook. The table opposite shows estimates of the sensitivity of the economy to changes in these key drivers across the 3 scenarios.

**1. Global economic outlook:** the scenarios assume that the evolution of the pandemic and measures to contain it are similar in other countries. An earlier easing abroad compared to the UK would mean global demand for UK exports recovers faster. Also, UK exports would benefit from spillovers as supply chain disruptions ease.

## 2. Persistence of a fall in UK activity

a. How long social distancing and support measures are in place. These factors progressively increase across each scenario.

b. How households & businesses respond once measures are lifted. Persistent uncertainty in case 3 weighs on confidence and increases voluntary social distancing. This undermines spending and hiring compared to cases 1 & 2. In contrast, these impacts are short-lived and unwind rapidly in case 1.

**3. Degree of long lasting scarring in the economy:** the prolonged period of crisis and weaker recovery in case 3 weighs heavily on investment and spending on training and innovation. This results in a reduction in the economy's productive potential and hence greater scarring outcomes than the other cases.

**Latest evidence has been encouraging and point to a V shape recovery in the near term.** High frequency data show some improvement in the UK's main trade partners since April as restrictions have been rolled back. UK data suggest the economy troughed in April, with a recovery emerging thereafter. Suppression measures have been gradually unwound since May. In June, retail stores reopened, from July some hospitality and leisure businesses are set to resume trading and planned reductions in travel restrictions have also been announced. Alongside this, business surveys have improved, retail sales rebounded in May and anecdotal evidence of advance bookings suggest pent up demand will add impetus to the recovery.

	Scenario 1: V	Scenario 2: Delayed V	Scenario 3: W
<b>Covid assumptions</b>			
<b>Strict social distancing measures in place</b>	3 months	5 months	12-18 months
<b>Working vaccine timescales</b>	Early 2021	Mid 2021	End 2021
<b>GDP</b>			
<b>Peak to trough hit to output</b>	26%	26%	39%
<b>Number of quarters to return to pre-covid level</b>	2020Q4	2022Q1	2025Q2
<b>LT scarring vs precovid forecast – levels*</b>	0%	4%	10%
<b>LT scarring vs precovid forecast - growth rates**</b>	0	0	-0.2
<b>Unemployment Rate</b>			
<b>Peak to trough hit to unemployment rate***</b>	5.9	6.3	11.1
<b>Number of quarters to return below 5%</b>	10	15	37
<b>LT scarring (vs precovid forecast)**</b>	0	0.2	1

Source: Experian \* Percentage loss in level of GDP by 2030 \*\*Percentage point difference in 2030 \*\*\* percentage points

**While these developments are encouraging, maintaining the momentum over the medium term will be difficult for a number of reasons.** The squeeze on consumer incomes due to job shedding and lower earnings is unlikely to turnaround quickly and the tapering of the furlough scheme from August risks triggering further increases in unemployment. Alongside this, the relatively swift timetable for rolling back suppression measures has raised the risk of a resurgence in Covid cases and a potential W type scenario. Even if the government is able to contain these locally, the likely response (local lockdowns) will weigh on the recovery. This backdrop will keep businesses and consumers cautious, which could drive behaviours such as voluntary social distancing and reduced appetite to spend.

# Annex 1: Pre-Covid baseline forecasts

Annual GVA growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.6	0.9	1.4	1.6	1.6	1.6	1.6
Calderdale	0.8	0.7	1.3	1.5	1.5	1.5	1.4
Kirklees	0.9	0.8	1.3	1.5	1.5	1.5	1.5
Leeds	1.5	1.0	1.6	1.8	1.8	1.8	1.8
Wakefield	0.8	0.6	1.2	1.4	1.4	1.5	1.4
YH	0.9	0.8	1.3	1.5	1.5	1.5	1.5
UK	1.3	1.1	1.6	1.7	1.8	1.8	1.8

Annual workforce jobs growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.0	0.6	0.7	0.7	0.5	0.5	0.5
Calderdale	-0.6	0.6	0.6	0.5	0.5	0.5	0.4
Kirklees	-0.7	0.6	0.5	0.5	0.5	0.4	0.4
Leeds	0.7	0.9	0.7	0.7	0.7	0.6	0.6
Wakefield	-0.2	0.6	0.5	0.5	0.5	0.4	0.4
YH	-0.2	0.6	0.5	0.5	0.5	0.4	0.4
UK	1.7	0.7	0.6	0.6	0.5	0.5	0.5

ILO unemployment rate (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	5.6	5.6	5.4	5.2	5.1	5.1	5.1
Calderdale	4.0	4.0	3.9	3.8	3.7	3.7	3.8
Kirklees	4.3	4.3	4.4	4.2	4.2	4.2	4.3
Leeds	4.1	4.2	4.2	4.0	3.9	3.9	4.2
Wakefield	4.6	4.4	4.3	4.0	3.8	3.8	3.9
YH	4.4	4.4	4.3	4.2	4.1	4.1	4.2
UK	3.8	3.9	3.9	3.9	3.8	3.8	3.8

Real incomes growth (%)							
	2019	2020	2021	2022	2023	2024	2025
Bradford	0.8	0.7	1.2	1.5	1.6	1.7	1.8
Calderdale	0.6	0.6	1.1	1.3	1.5	1.5	1.5
Kirklees	0.9	0.9	1.3	1.5	1.7	1.7	1.8
Leeds	1.0	1.2	1.5	1.8	2.0	2.0	2.1
Wakefield	0.7	0.9	1.3	1.4	1.5	1.5	1.7
YH	0.8	0.9	1.3	1.5	1.7	1.7	1.7
UK	1.0	1.3	1.6	1.8	1.9	2.0	1.9

Source: Experian