Macroeconomic scenarios for London’s economy post COVID-19

Scenarios approach, storylines and first projections to 2030

GLA Economics

09 December 2020

Disclaimer

- This fourth output of the macroeconomic scenarios project updates the third output which was published on 15th September 2020. It is an interim output, which the Greater London Authority is making available for the benefit of external stakeholders in tackling the COVID-19 crisis.

- The scenarios:
  - are not meant to represent optimal policy responses, but different futures against which policy responses could be tested.
  - are not forecasts – they do not represent what we think will happen but what could plausibly happen under alternative assumptions about the future.
  - are inevitably subjective, although they have been informed by discussions with internal and external analysts and economists.

- We will continue to track actual data in order to review our assessment of the likelihood of alternative scenario outcomes.

Executive Summary (1)

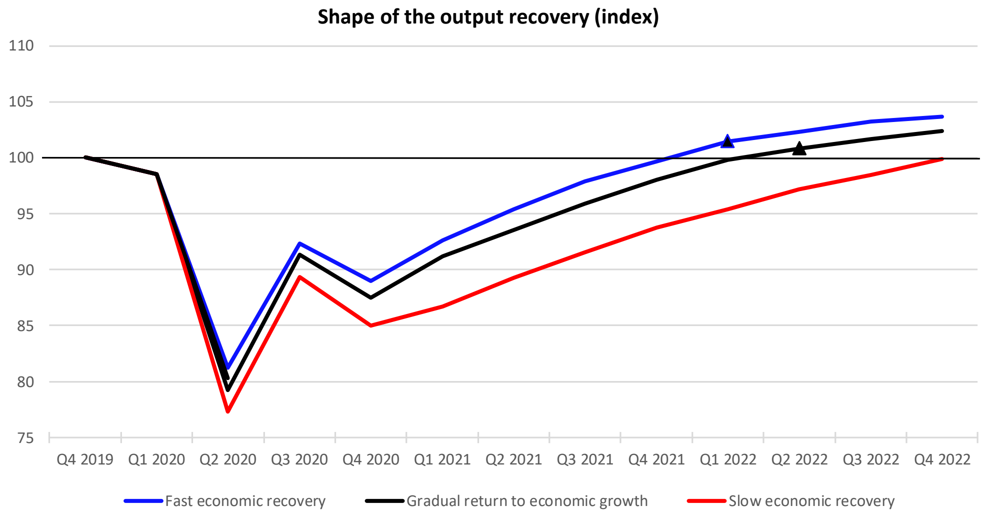
- This slide pack is the fourth output of the GLA Economics-led project on developing economic scenarios for London's economy post COVID-19.
- It updates the third output published on 15th September by including new medium-term projections and a set of projections to 2030 for GVA only.
- The main aim of the project was to develop a set of high-level macro-economic scenarios in order to inform the development of recovery strategies in London, reflecting unprecedented uncertainty on the economic outlook.
- The scenarios are envisaged as a common framework/set of assumptions to inform more detailed GLA analyses.
- The primary scenario dimensions include Effectiveness/nature of public health response and Effectiveness/impact of economic support measures.
- Other scenario dimensions include: Brexit and migration; International economic context; Technology and innovation; Financial climate; Political economy; Economic Geography and GHG emissions.

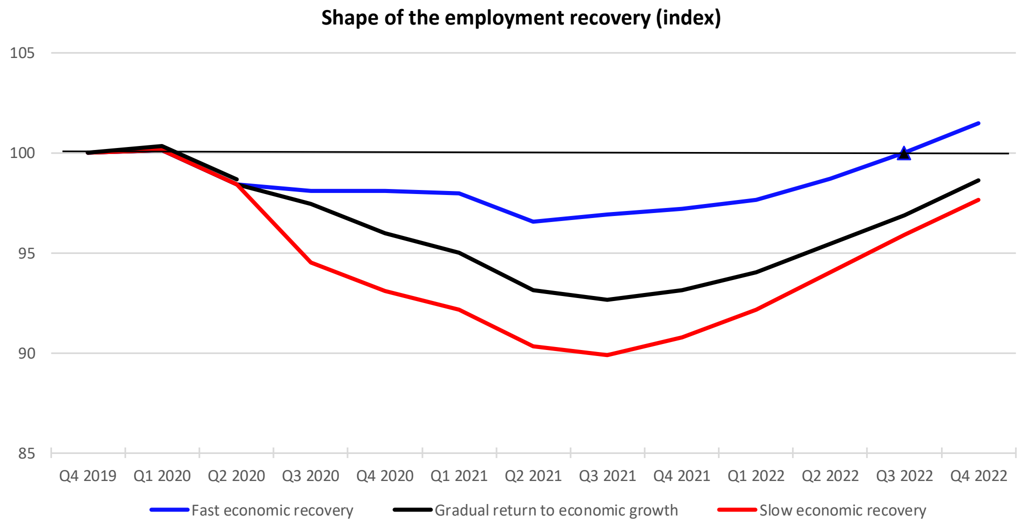
Executive Summary (2)

- Three core scenarios have been developed: Scenario 1 - Fast economic recovery (an optimistic but plausible scenario); Scenario 2 - Gradual economic recovery and Scenario 3 - Slow economic recovery.
- Scenario enumeration in the long-term currently relies on top-down convergence assumptions. It is envisaged that these will also be complemented by modelling based on the London input-output tool.

Executive Summary (3)

- In all scenarios, the pace of the output recovery (W-shaped) is markedly slower than the pace of the initial fall. Under the Slow return to economic growth scenario, London's economy takes more than three years to reach pre-crisis levels.
- Employment recovery is projected to be U-shaped and significantly slower than output recovery, so that pre-crisis employment levels are not reached before 2023 in the Gradual economic recovery scenario.





Source: GLA Economics

Outline

Outline

1. Project aims and background
2. Overview of scenarios approach
3. Scenarios assumptions
4. Medium-term scenario projections
5. Long-term scenario projections
6. Appendix

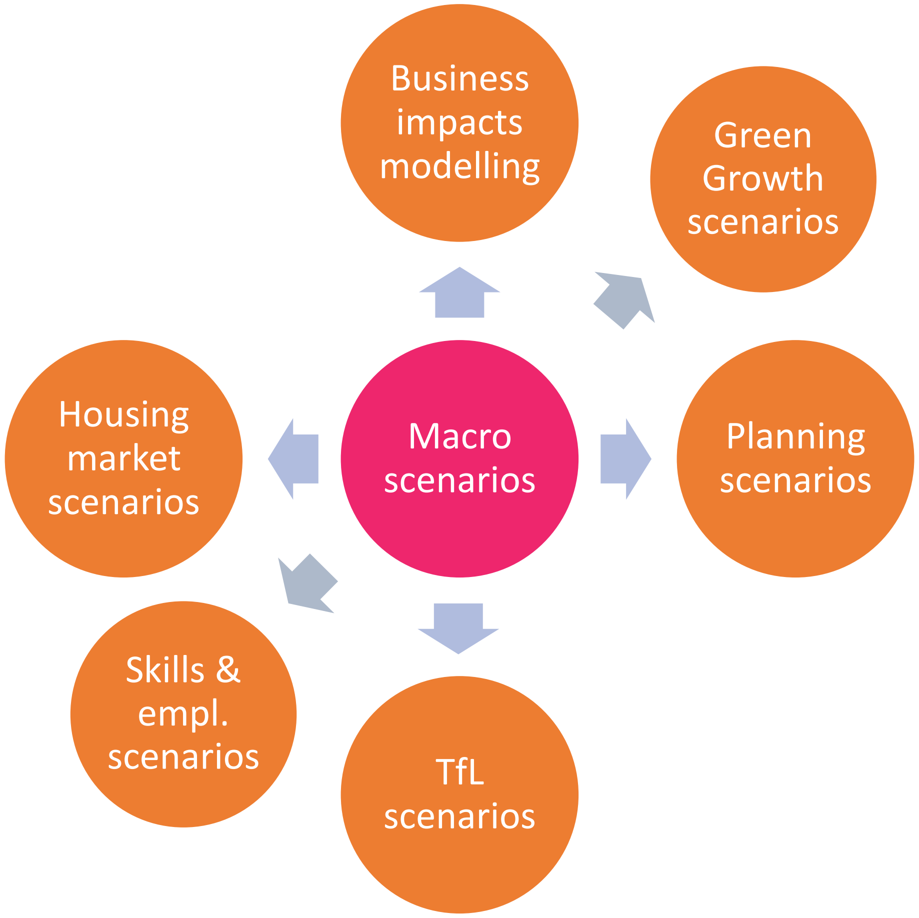
Project aims

- to develop a set of high-level macro-economic scenarios that reflect unprecedented uncertainty in order to inform the development of recovery strategies in London
- to help ensure that different analyses undertaken by the GLA on COVID-19 impacts and recovery can be informed by a common framework
- to identify key parameters/scenario markers to track outturn vs. scenario assumptions and adjust our views on the relative likelihood of alternative futures

What do we mean by scenarios?

Possible alternative futures for London's economy (all the way to 2030) reflecting self-consistent assumptions about public health and economic impacts of COVID-19 as well as other long-term economic and policy drivers

A common framework can help ensure consistency and read-across between different GLA analyses



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1. Introduction to macroeconomic scenarios
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Overview of scenario dimensions (1)

Primary dimensions

- Effectiveness/nature of public health response
- Effectiveness/impact of economic support measures

Secondary dimensions

- Brexit and migration
- International economic context
- Technology and innovation
- Financial climate
- Political economy
- Economic Geography
- GHG emissions

Overview of scenario dimensions (2)

Primary scenario dimensions

Inform quantification of key scenario parameters/ad-hoc model assumptions, reflecting different storylines for each scenario.

AND/OR

Qualitatively describe what may need to be true for a particular scenario to materialise

Additional scenario dimensions

Contribute to quantification of scenario parameters

AND/OR

Qualitatively describe what may need to be true for a particular scenario to materialise

Integrate/
compound

Affect

Scenario modelling overview – Medium term vs. Long-term

Medium-term (to 2022)

- Use of GLA Economics forecasting model – top-down approach to look at sectoral impacts (20 industries) – plus manual adjustments based on latest evidence and judgement.
- Has the ability to reflect ad-hoc adjustment to simulate economics shocks.
- Focus on real GVA, workforce jobs, household income and household expenditure.
- Assumptions required on length of anti-COVID restrictions, plus other macroeconomic assumptions.

Long-term (to 2030)

- Top-down assumptions about levels and speed of GVA convergence/productivity, etc.

- Bottom-up (I/O) simulation of:
  - Changes in final consumption (by sector), including exports to RUK/world.
  - Changes in output of individual sectors, which bears on both intermediate consumption by other sectors, and final consumption.
  - Effects of changes to compensation of employees by sector
  - Effect on labour supply of changes in population

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Effectiveness/nature of public health response

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
No return to Tier 3 for London after the second Lockdown. Restrictions are eased early in 2021. A vaccine is found and made widely accessible by early 2021 so "normality" returns in the short-term.	No return to Tier 3 for London after the second Lockdown. Social distancing and other small restrictions remain until later in 2021 when one or more vaccines become widely accessible.	Third wave of pandemic leads to reintroduction of some lockdown measures in Q1 2021. The logistics of mass-vaccination means that vaccine roll-out is delayed and does not complete before late 2021.

Effectiveness/impact of economic support measures

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
The UK performs better than its main trade partners in economic terms. Aggregate consumption and investment start to recover early 2021 as business and consumer confidence returns. Unprecedented fiscal and monetary policies absorb quickly most of the negative impact of the shock. Little medium or long-term economic scarring, although employment recovery lags GVA.	The UK performs similarly to its main trade partners in economic terms. Aggregate consumption and investment start to recover in 2021. Lower confidence and higher uncertainty persist for more than one year. Fiscal and monetary policies will help substantially mitigate the negative impact of the shock. Economic scarring limited to the medium term as employment recovers less quickly than GVA.	The UK performs similarly to/worse than its main trade partners in economic terms but global growth as a whole falters in the medium and long-term. Aggregate consumption and investment remain weak in the medium-term, while global trade decreases significantly in the medium-term. Notwithstanding the fiscal and monetary policies introduced by the Government, the prolonged recession leaves widespread economic scarring, some of which persists in the long-term.

Long-term GVA convergence assumptions

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
London’s economy returns to its pre-COVID trend growth (rate and level) by 2024. No long-term economic scarring.	London’s economy returns to its pre-COVID trend growth rate eventually, but only in the long-term (after 5+ years) as there is a degree of economic scarring in the medium term.	Persistent economic scarring means that in the long-term the economy will see a slow recovery to a diminished trend growth trajectory by 2030.

Brexit and migration

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
FTA with the EU negotiated by the end of 2020. Notwithstanding increased levels of corporate debt, London businesses are successful in continuing to export to the EU while re-orientating part of their exports to other countries with which the UK has FTAs in place. Post-Brexit migration regime softened to allow more socially valuable workers (e.g. carers). Little impact of pandemic on inter-UK migration.	Canada style FTA with the EU negotiated by the end of 2020. Notwithstanding increased levels of corporate debt, London businesses are successful in continuing to export to the EU while re-orientating part of their exports to other countries with which the UK has FTAs in place. Post-Brexit migration regime introduced as planned. Little impact of pandemic on inter-UK migration.	No FTA with the EU at the end of 2020, WTO trade with the EU thereafter. High level of indebtedness among London firm hampers their efforts to re-orientate their exports to other countries with which the UK has FTAs in place. Post-Brexit migration regime combined with lower labour mobility leads to zero net migration, leading to skills and labour shortages. This is due to a fall in EU migration and zero uptick in high skilled migration from the rest of the world. Decline in inward migration from the rest of the UK due to slower long-term growth in the capital and a change in attitude to the safety of living and working in a large city.

International economic context

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
Trade tensions persist in the short-term and some supply chains shift from global to regional, but there isn’t a wholesale acceleration of deglobalisation trends. Longer term there is increased global co-operation on trade and health which leads to a pick-up in global trade. Greater resilience in the global financial system compared to 2008 helps prevent widespread financial crises. As they quickly re-emerge from the COVID-19 crisis, global cities retain their comparative advantage as sticky behaviours and technologies (e.g. remote working) help them improve liveability while retaining agglomeration economies.	Acceleration of trade-disputes and de-globalisation trends but these do not result in all-out trade wars or to a general escalation of geopolitical tensions. Some import substitution occurs but this is mainly in goods not services. International business travel declines with more remote working. Broad resilience in the global financial system. After a slow re-emergence global cities retain their comparative advantage as sticky behaviours and technologies (e.g. remote working) help them improve liveability while retaining agglomeration economies.	Significant acceleration of trade-disputes and de-globalisation trends leading to multiple trade-wars. Geopolitical tensions also increase. Long term global growth slows and there is a move to more self-sufficiency in countries which reduces exports further. COVID-19 continues to spread in Africa, and restrictions continue to be in place on international travel movements. Turbulences may appear in financial markets in several countries but none will be comparable to the 2008 crisis. Global cities see a reduction in their comparative advantage as new technologies and behaviour drive a reduction in agglomeration economies. Virtual networks significantly reduce the importance of accessibility/connectivity to central city locations.

Technology adoption/innovation

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
The COVID-19 recession accelerates change in business models (e.g. shift to online retail, remote working, etc.) as well as adoption and diffusion of existing technologies (e.g. 5G, Cloud) and this leads to a significant medium-term productivity bonus. In the medium to long-term COVID-19 prompts a rapid change in business models towards greater automation/AI to minimise risks and increase resilience. This leads to significant productivity benefits (and possibly other societal benefits). While in the long-term the transition has a net job-creating effects (especially in London and in a benign economic environment), there remains a challenge in terms of re-training/redeployment in the medium-term, with some sectors and occupation seeing job losses.	The COVID-19 recession accelerates change in business models as well as adoption and diffusion of existing technologies. This leads to a moderate productivity bonus in the medium-term. Investment in AI/automation is initially slowed down as organisations find it difficult to introduce major change processes while working in remote. In the long-term it proceeds at a quick pace, prompted by the resilience agenda. This leads to some productivity (and possibly societal) benefits. While overall the transition has net job-creating effects in the long-term, the gradual nature of the return to growth reduces the pace of creation of new jobs for low-skilled workers.	The COVID-19 recession accelerates change in business models as well as adoption and diffusion of existing technologies. This leads to a moderate productivity bonus in the medium term. Investment in AI/automation is initially slowed down in the medium to long-term as organisations find it difficult to introduce major change processes while working in remote. Sustained reduction in investment and high level of unemployment/low wages also delay and reduce potential productivity and social benefits. A slower transition allows more time for workers retraining and redeployment and reduces the extent of specific sectors and occupations seeing job losses. On the other hand a persistent lack of demand constraints the generation of new jobs for low-skilled workers.

Financial climate

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
The banking sector is essentially not hit by the crisis or they manage to cover their capital extra needs internally and without an impact on bank credit.	The banking sector is hit only temporarily by the crisis and they manage to cover their capital extra needs quickly.	The banking sector experiences some losses due to high non-performing loans and an extremely expansionary monetary policy. This ends up in substantial recapitalisation needs by those banks and a potential contraction of the bank credit with negative effects on aggregate consumption and aggregate investment. But the impact of these events is reduced compared to the 2008 financial crisis.
Financial markets recover their size, liquidity, returns, and volatility pre-crisis levels rapidly.	Financial markets recover their size, liquidity, returns, and volatility pre-crisis levels in less than a year.	A long-lasting high volatility, fragmentation, and a permanent change of the preferences by investors (generally towards more liquid assets and private bonds) result in some underperformance of the financial markets in supporting the real economy.
The impact of the pandemic on household finances lasts less than a year as loss of employment is contained and confidence returns relatively quickly in 2021. No long-term impacts on consumption/saving decisions.	Consumption is reduced across the household income distribution for most of 2021, with lower income household coming under significant financial stress and medium to high income household increasing their net savings. Consumption returns to normal gradually as net job creation resume later in 2021 and confidence returns.	Most households see a longer reduction in income and a higher indebtedness, resulting in aggregate consumption remaining significantly lower than pre-Covid levels for several years.

Political economy

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
Government spending is reined in gradually, with planned investment in infrastructure maintained. Rapid fiscal tightening is generally avoided although there is some public spending restraint.	Government spending is reined in gradually, with planned investment in infrastructure maintained. A mild form of fiscal tightening is followed.	High Government debt leads to a rapid shift of policy towards fiscal tightening, undercutting growth and investment. High debt further leads to a UK financial crisis.
The Government's rebalancing agenda is maintained and reframed but not in a way that directly disadvantages London.	The Government's rebalancing agenda is maintained but not in a way that directly disadvantages London.	An intensification of anti-London feeling leads to falling UK government investment within the capital.
Sterling depreciates gradually due to the ongoing impact of Brexit, while the Bank of England gradually raises interest rates over the course of the decade.	Sterling depreciates gradually due to the ongoing impact of Brexit, while the Bank of England gradually raises interest rates over the course of the decade.	Inflationary pressures and pressures on sterling mount leading to the Bank of England raising interest rates markedly.
Further investment in public transport is seen as key for the recovery with additional transport stimulus to unlock housing growth and electrify transport in the long-term.	TfL is able to maintain a level of investment close to current levels in the long-term, even though some major investment programmes may no longer go ahead.	Financial constraints on TfL and UK Government decisions lead to a decline in transport infrastructure investment in the capital in the long-term.
Government support to firms is rowed back gradually. relatively few businesses go under and there is little long-term economic scarring.	Government support to firms is rowed back gradually. relatively few businesses go under and long-term economic scarring tends to be confined to specific sectors.	Government support for firms is withdrawn too hastily leading to permanent economic scarring.

A new scenario dimension: London’s economic geography (1)

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
A relaxation of social distancing rules from the current 2m rule increase capacity available on the TfL network in the short-term and business passengers are relaxed about returning. In the medium to long-term is a return of large scale commuting into the CAZ notwithstanding that some of the lifestyle adjustment that people have made during the pandemic are sticky, e.g. an increase in people who work remotely at least 1 or 2 days a week. London quickly returns to being a large international attractor of talent, business &leisure visitors, and international students. Agglomeration economies in the CAZ are maintained and in some respect enhanced, as life-style changes help to manage externalities such as congestion and help mitigate the costs of doing business in central London.	A relaxation of social distancing rules from the current 2m rule increase capacity available on the TfL network in the short to medium term. Business passengers return gradually. In the long-term there is a return of large scale commuting into the CAZ in the main, although many employers and employee embrace hybrid ways of working (remote and in the office). A share of former commuters shifts to new working patterns whereby they only travel to central London occasionally. In the medium to long-term, London returns to being a large international attractor of talent, business & leisure visitors and international students. Overall, agglomeration economies in the CAZ are maintained, but the reduction in number of people travelling to it daily reduces activities and employment in a number of services that support CAZ workers (e.g. catering, retail).	A relaxation of social distancing rules from the current 2m rule increase capacity available on the TfL network in the medium-term. However, business passengers do not return to the network in large numbers. Commuting to the CAZ remains a fraction of what it used to be pre-COVID as a large share of workers continue to work predominantly from home. A decline of London’s cultural industries and night-time economy translates into London loosing a significant amount of its attractiveness as a destination for work, leisure and study. There is a weakening of placed-based agglomeration economies in the CAZ, which are replaced by more virtual forms of agglomeration. A significant share of economic activity shift outwards from London to the Wider South East and to some extent from inner to outer London.

A new scenario dimension: London's economic geography (2)

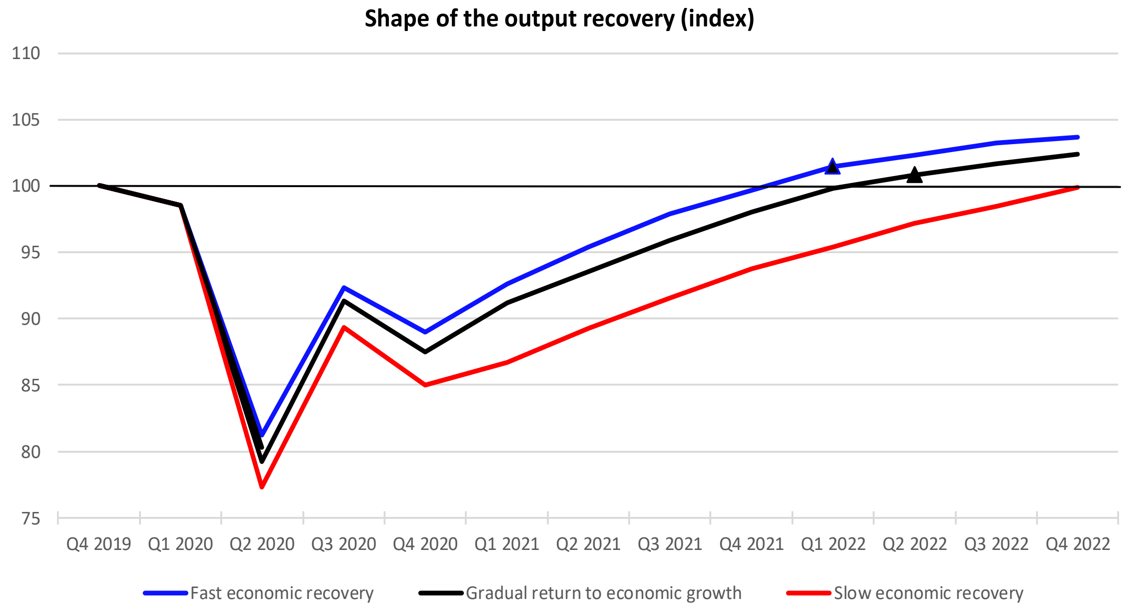
Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
Town centre and high street economies recover quickly with few business failures induced by COVID-19 (while longer-term structural changes continue). Social distancing restrictions relaxed to the extent that high street footfall and the retail, leisure, culture and hospitality sectors can return relatively quickly towards pre-Covid operating arrangements. In the long-term, town centres and high streets see some benefits from an increase in the time that people spend living and working locally, boosting local footfall and spend.	Town centre and high street economies and footfall recover gradually, with social distancing and consumer confidence limiting the ability of retail, leisure, culture and hospitality to return to pre-Covid operating arrangements in the medium-term. Reduced employment and consumer spend leads to a degree of business failures. High street vacancy rates rise initially but gradually reduce as new business start-ups occupy vacated space. In the long-term, town centres and high streets see some benefits from an increase in the time that people spend living and working locally, boosting local footfall and spend.	Town centres and high street economies are severely impacted by the pandemic in the short to medium-term, with significant numbers of business failures. Persistently low growth, weakened consumer confidence and unemployment lead to longer lasting impact on commercial property vacancies and town centre attractiveness for investment. In the long-term (but limited to certain high-streets/town centres/sectors) there is a degree of resurgence in economic activity due to a more permanent shift of economic activity towards outer London.

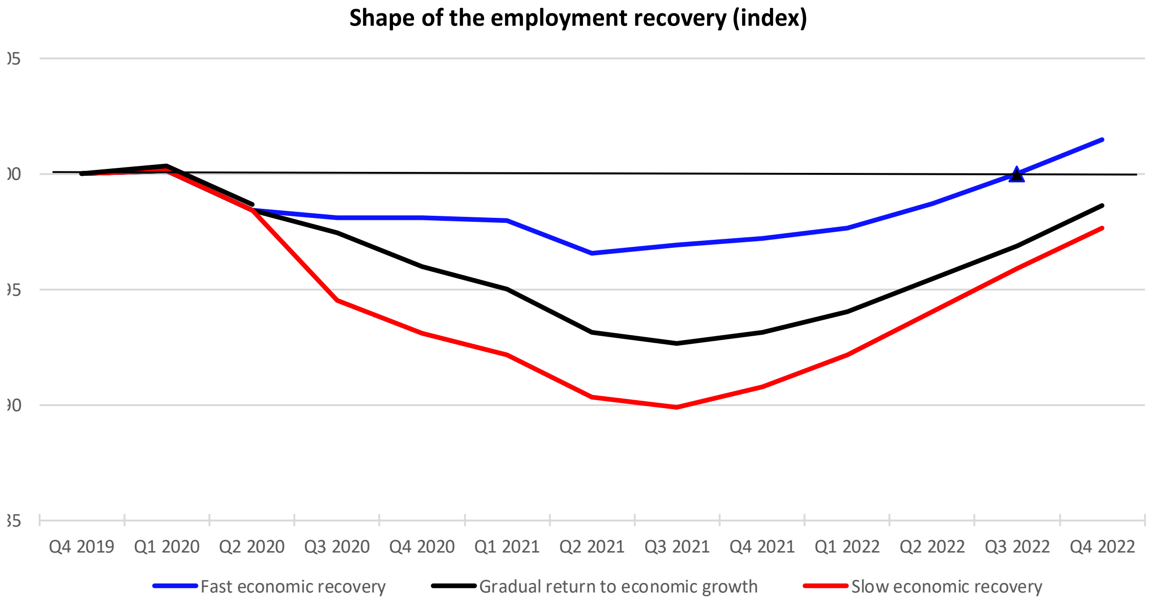
GHG emissions

Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
The recession leads to a short-lived reduction in investment and in emissions, while there is a relatively quick recovery of carbon and fossil fuel prices. Investment in low-carbon infrastructure in London quickly returns to its pre-COVID BAU trend. Businesses low-zero carbon transformation programmes as staff physically return to the office. Decarbonisation of UK power generation continues in line with HMT Green Book assumptions.	After a major slow-down in investment (and in emissions) policy and investment drive towards net zero carbon resumes. Carbon prices and fossil fuel prices recover in the long-term, although the latter remain significantly lower than in the past as we enter the fossil fuels ‘endgame’. Investment in low-carbon infrastructure in London and low-carbon transformations by businesses are subject to some short-term delay but then resumes its BAU pathway as the economy resumes a healthy growth-trends after a few years. Decarbonisation of UK power generation continues in line with HMT Green Book assumptions.	Lower growth depresses emissions in the short-term (led by business and transport emissions decreases). However, with a prolonged recession focus shifts away from decarbonisation, and investment in green technologies, helped by persistently low fossil fuel prices not compensated for by higher carbon taxes and tighter regulation. Investment in low-carbon infrastructure in London by the public sector, businesses and households (e.g., EV charging, new processes, energy efficiency and domestic fuel switch) is significantly delayed, with possible “lock-in” effects. Businesses put low-carbon transformation on hold as a large part of their workforce continues to work remotely in the medium-term. Decarbonisation of UK power generation continues (more or less) in line with HMT Green Book assumptions.

Outline

Medium-term scenarios projections



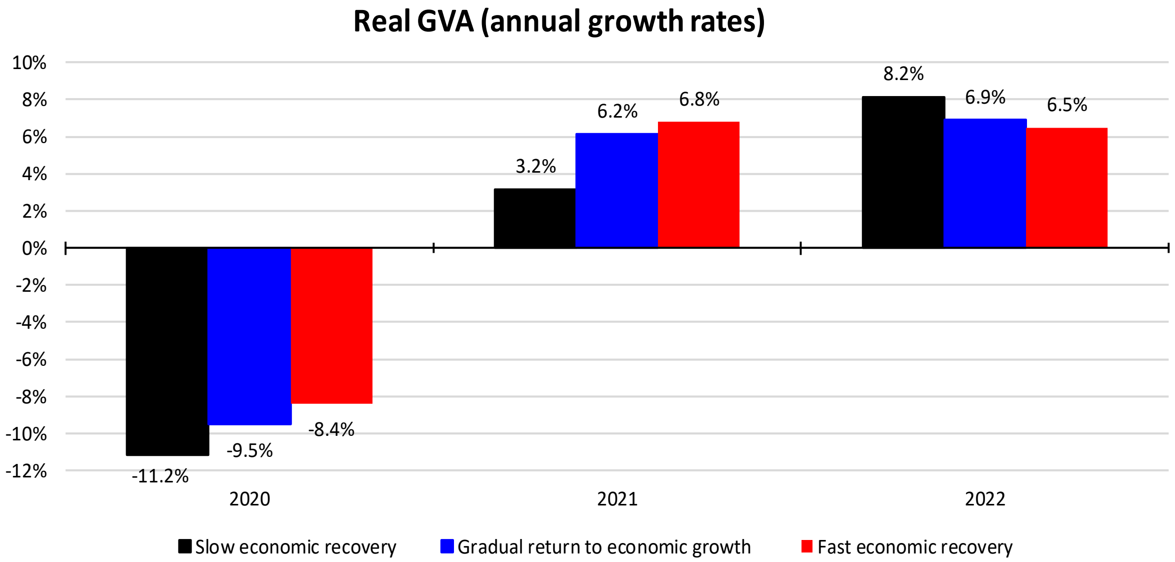


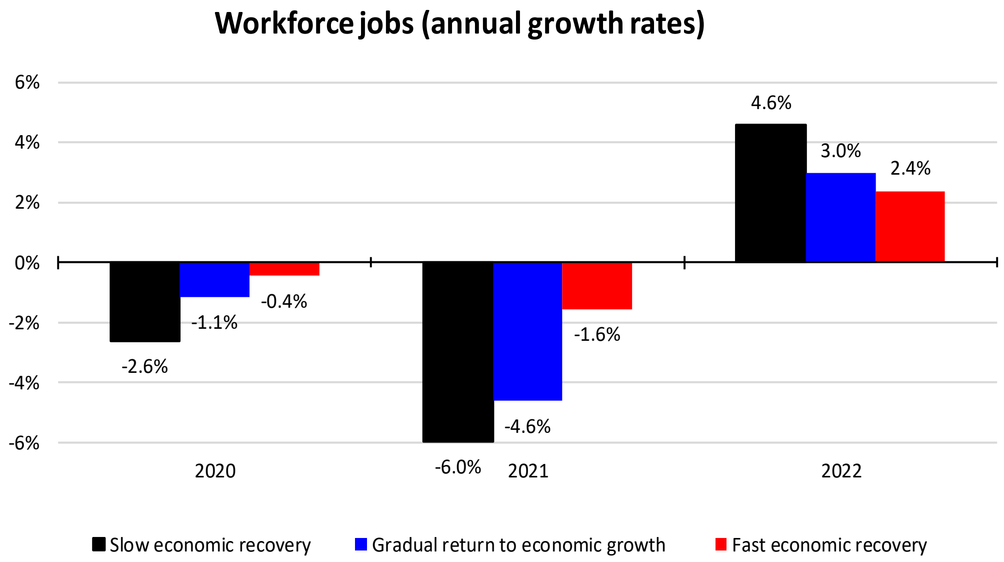
Source: GLA Economics. Index of 100 = pre-crisis level. The 'triangle' indicates the quarter when the corresponding series reaches its pre-crisis level (sometimes the triangle is above 100, meaning that pre-crisis levels were not only reached but also surpassed in the same quarter).

The overall storyline behind the Gradual Recovery scenarios

Q2 2020 (First Economic Shock)	Q3 2020 (Economic Reactivation)	Q4 2020 (Second Economic Shock)	2021 and 2022 (Transition and Reconstruction)
• Lockdown leads to unprecedented contraction of economic activity. • Consumption and trade fall historically large. • Investment freezes. • Public sector spending and debt increases importantly. • Business failures and unemployment soar, although mitigated by Gov. support • Household income reduces but to a lower extent than output. • Uncertainty and lack of consumer confidence rise to historic highs. • Easing of lockdown at the end of the quarter leads to a resumption of growth.	• As lockdown eases over the summer, so does the economic activity recovery which continues. • Consumption and trade bounce back notably compared to Q2 but remain quite subdued still in annual terms. • Businesses which survived Q2 2020 resume their activities slowly. Restructuring of some businesses and sectors which survived starts. • Some persistent damage in the sectors most exposed to social interaction (e.g. culture, hospitality, construction) • Net job destruction continues. • Public sector spending and debt keep increasing. • Uncertainty remains very high. • The degree of this initial recovery will depend on 1) the speed of the lockdown easing 2) a potential second virus outbreak, and 3) the impact of the end of CJRS.	• The recovery slows, especially in November because of the second lockdown in England. • The return to the 'old normality' seems closer but social distancing measures remain after the second lockdown. • Lagged recovery for sectors most exposed to social interaction. • Businesses and sectors restructure to adapt to a 'new normality'. • Employment keeps decreasing although at a slow pace because of the CJRS. • Public sector spending and debt continue increasing. • Uncertainty remains high and Brexit-related uncertainty plays a greater role as agreement is not reached until last minute. • The degree of the recovery will mainly depend on 1) the new social distancing rules 2) the availability of a vaccine and 3) transport constraints	• Transition between 'new normality' - and a situation similar to 'pre-lockdown' takes place in these years. • The actual economic expansion starts in the second half of 2021 as restrictions reduce and mass-vaccination is a fact. • Output remains below pre-crisis levels until Q3 2022. • Gradual return of visitors and tourists from late 2021. • Net employment creation starts by the end of 2021 and is solid from, but does not recover pre-crisis levels yet. • Investment (and recapitalisations) key to support companies which survived but remain weak. • A degree of fiscal consolidation begins. • The success of the expansion will depend on 1) the availability of a potential vaccine, 2) the EU trade deal 3) London's capacity to attract investment, 4) the kind of fiscal consolidation chosen 5) the international context and 6) transport constraints

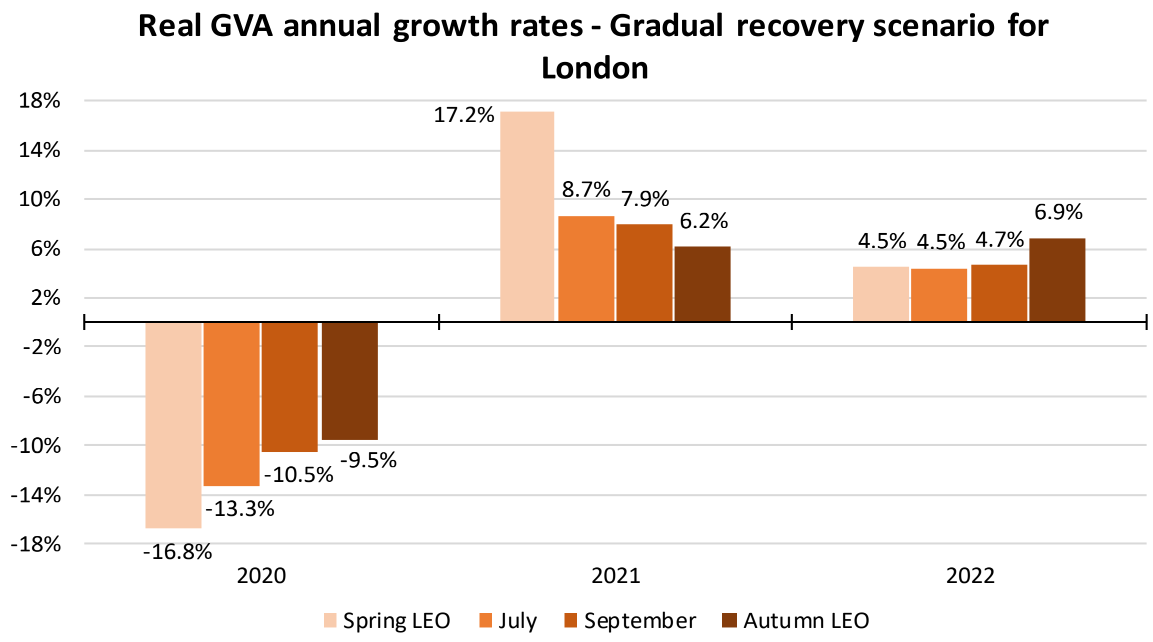
Medium-term scenario projections: annual growth rates

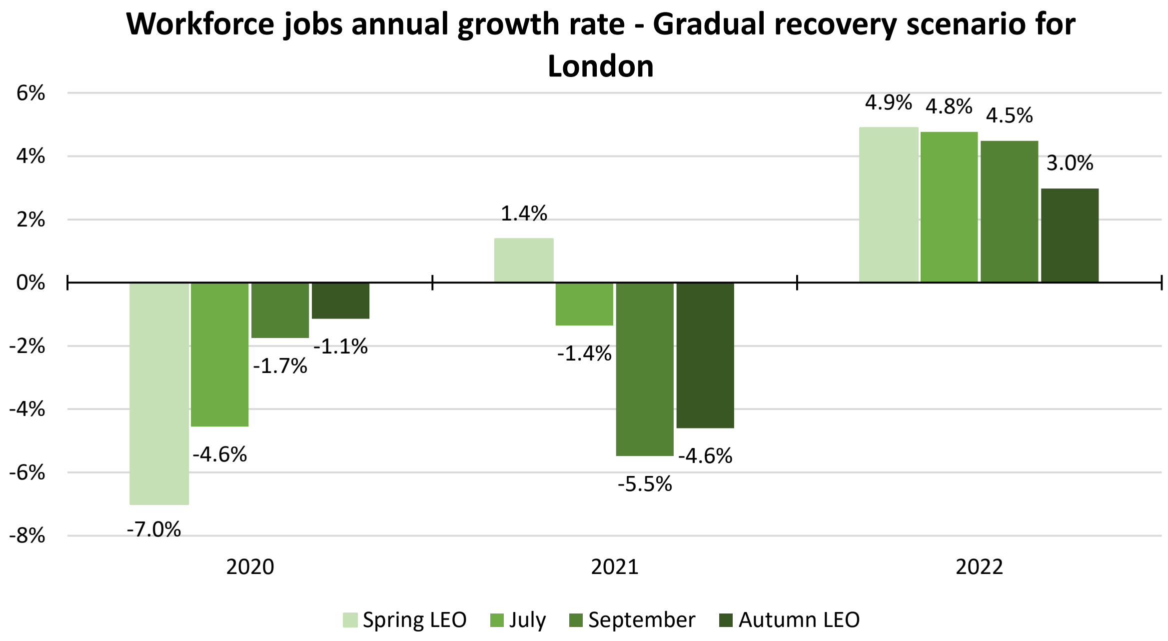




Source: GLA Economics estimates

Comparison of successive Gradual recovery scenarios throughout this year





Source: GLA Economics estimates

Sectoral projections for GVA in 2020 and jobs in 2021

Real GVA annual growth rate in 2020	
Sector	**%**
Agriculture, forestry and fishing	**-2.4**
Mining and quarrying	**-8.5**
Manufacturing	**-13.2**
Electricity, gas, steam and air-conditioning supply	**-5.1**
Water supply; sewerage and waste management	**5.6**
Construction	**-21.0**
Wholesale and retail trade; repair of motor vehicles	**-11.1**
Transportation and storage	**-20.9**
Accommodation and food service activities	**-48.3**
Information and communication	**-7.1**
Financial and insurance activities	**-2.4**
Real estate activities	**-2.0**
Professional, scientific and technical activities	**-9.7**
Administrative and support service activities	**-20.0**
Public administration and defence; compulsory social security	**1.8**
Education	**-22.7**
Human health and social work activities	**-17.4**
Arts, entertainment and recreation	**-28.0**
Other service activities	**-25.2**
Activities of households	**-21.9**

Workforce jobs annual growth rate in 2021	
Sector	**%**
Agriculture, forestry and fishing	**-3.5**
Mining and quarrying	**-4.3**
Manufacturing	**-5.0**
Electricity, gas, steam and air-conditioning supply	**-4.9**
Water supply; sewerage and waste management	**-5.4**
Construction	**-5.5**
Wholesale and retail trade; repair of motor vehicles	**-3.3**
Transportation and storage	**-4.4**
Accommodation and food service activities	**-6.5**
Information and communication	**-2.5**
Financial and insurance activities	**-3.5**
Real estate activities	**-4.0**
Professional, scientific and technical activities	**-4.1**
Administrative and support service activities	**-5.8**
Public administration and defence; compulsory social security	**0.5**
Education	**-1.8**
Human health and social work activities	**-1.0**
Arts, entertainment and recreation	**-6.0**
Other service activities	**-4.3**
Activities of households	**-9.3**

Source: GLA Economics estimates – 'Gradual return to economic growth' scenario (December 2020)

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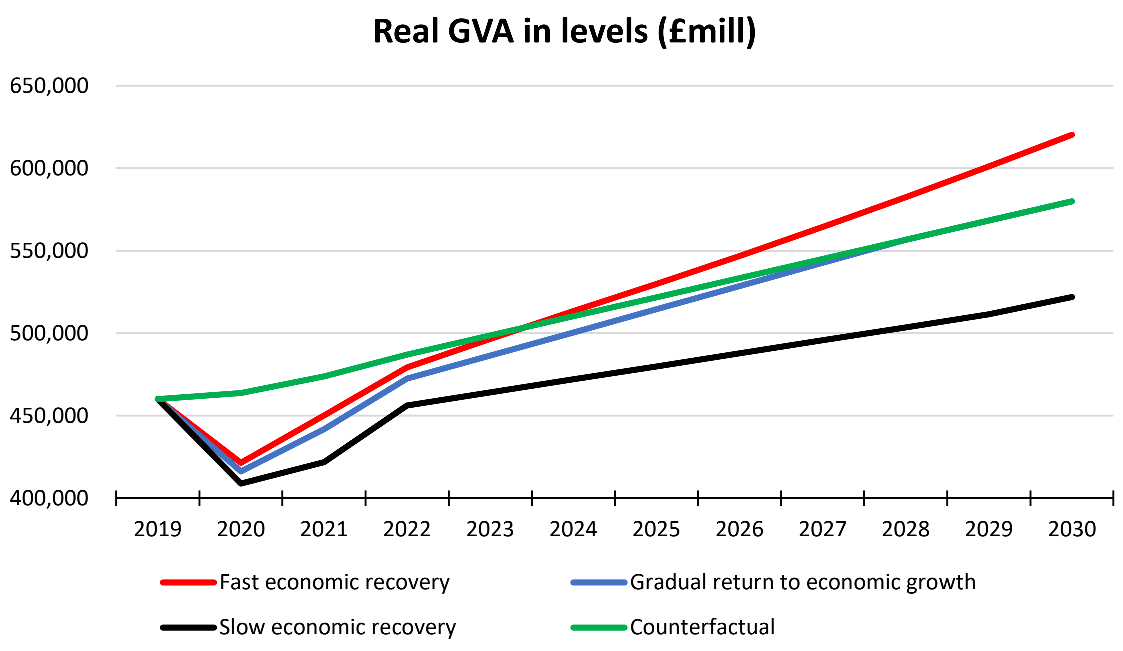

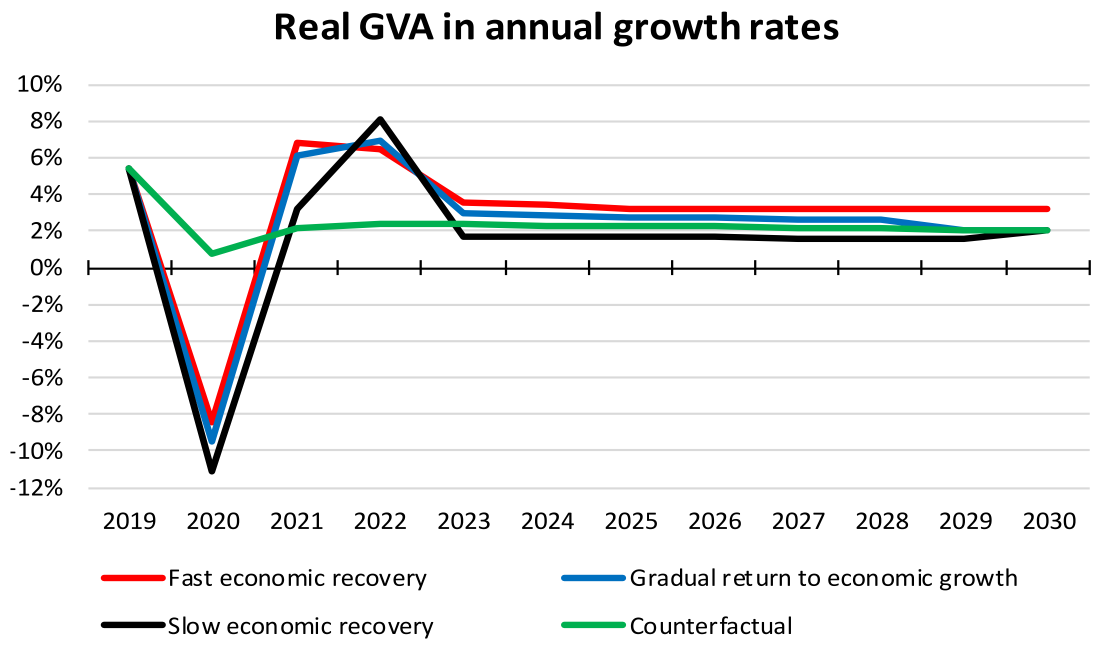

Source: GLA Economics

The story behind the long-term projections

	NO-COVID / Counterfactual	Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
GVA level in 2022	As estimated by GLAE in April 2020 forecasts	As projected in medium-term scenario 1	As projected in medium-term scenario 2	As projected in medium-term scenario 3
Time counterfactual level is reached	NA	2023	2028 (8 years after crisis, as in 1990s recession)	Never (over the relevant time horizon)
GVA Growth rate in 2030	Estimated by assuming convergence (linear or exp) from 2022 growth rate to steady state by 2041	3.2% (long-term London trend growth rate, convergence towards UK steady state does not start in the 2020s).	As in counterfactual (2.1%)	As in counterfactual (2.1%)
GVA level in 2030	Projected in line with the above assumptions	Higher than the counterfactual	As in counterfactual in 2030	Counterfactual - 10% (reflecting combination of microeconomic and macroeconomic scarring from COVID, plus WTO Brexit)
GVA growth rate in 2041 (steady state)	1.5% per year (based on OBR long-term/steady state projection)	NA	1.5% per year	1.5% per year

Summary of GVA annual growth rates in selected years

Real GVA – annual growth rates (selected years)

Year	Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
	GVA	GVA	GVA
2019	5.4%	5.4%	5.4%
2020	-8.4%	-9.5%	-11.2%
2021	6.8%	6.2%	3.2%
2022	6.5%	6.9%	8.2%
2025	3.2%	2.8%	1.7%
2030	3.2%	2.0%	2.0%

Source: GLA Economics

Summary of GVA in levels in selected years

Real GVA – levels, £m (selected years)

Year	Scenario 1: Fast economic recovery	Scenario 2: Gradual return to economic growth	Scenario 3: Slow economic recovery
	GVA	GVA	GVA
2019	460,103	460,103	460,103
2020	421,441	416,248	408,729
2021	450,056	441,855	421,734
2022	479,283	472,339	456,155
2025	529,849	514,514	479,857
2030	620,227	579,855	521,870

Source: GLA Economics

Real GVA quarterly levels over the GLA Economics forecasting period – Gradual recovery scenario -

Real GVA – levels, £m

Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
416,712	115,030	92,500	106,595	102,123	106,403	109,150

Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
111,925	114,377	116,511	117,664	118,640	119,524

Source: GLA Economics

Workforce jobs quarterly levels over the GLA Economics forecasting period – Gradual recovery scenario -

Workforce jobs – levels, thousands

Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
6,122	6,130	6,026	5,966	5,876	5,817	5,701

Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
5,673	5,701	5,758	5,844	5,932	6,039

Source: GLA Economics