INTERNATIONAL MONETARY FUND

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February 2022

2021 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE UNITED KINGDOM

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2021 Article IV consultation with the United Kingdom, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its February 16, 2022 consideration of the staff report that concluded the Article IV consultation with the United Kingdom.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on February 16, 2022, following discussions that ended on December 14, 2021, with the officials of the United Kingdom on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on February 1, 2022.
- An **Informational Annex** prepared by the IMF staff.
- A **Staff Supplement** updating information on recent developments.
- A **Statement by the Executive Director** for the United Kingdom.

The document listed below has been or will be separately released.

Financial Stability System Assessment

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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Washington, D.C.

PRESS RELEASE

PR22/47

IMF Executive Board Concludes 2021 Article IV Consultation with the United Kingdom

FOR IMMEDIATE RELEASE

Washington, DC – **February 16, 2022**: The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the United Kingdom. This also included a discussion of the findings of the Financial Sector Assessment Program (FSAP) exercise for the United Kingdom.[2] The publication of the Staff Report and Financial System Stability Assessment (FSSA) bundle will be followed in early March by publication of the FSAP Technical Notes underpinning the FSSA.

The UK entered 2021 with significant challenges but also with some positive developments. Covid cases were spiking again, prolonging health and economic impacts. Elements of the post-Brexit framework were left unsettled, policy frameworks were under review, and post-pandemic growth strategy and climate policies had not been spelled out. At the same time, the EU-UK Trade and Cooperation Agreement was concluded. An ambitious vaccination campaign was just launched, and further policy support was deployed to contain the pandemic impact.

The recovery in 2021 has proceeded faster than expected, but rising price pressures have emerged. Growth is estimated to have reached 7.2 percent in 2021 on the back of continued policy support and rapid vaccination. However, inflation rose to 5.4 percent at end-2021 due to strained global supply chains, rising traded goods and energy prices, and tightened labor markets. Fiscal policy has been able to rotate towards more targeted support, with a back-loaded medium-term consolidation plan. With continued above-target inflation readings, the BoE made a first move to raise the policy rate in December, and followed this with another rise in February. Financial stability has been maintained, and macroprudential policies are returning to more standard risk settings.

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[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] Under the FSAP, the IMF assesses the stability of the financial system, and not that of individual institutions. The FSAP assists in identifying key sources of systemic risk and suggests policies to help enhance resilience to shocks and contagion. In member countries with financial sectors deemed by the IMF to be systemically important, it is a mandatory part of Article IV surveillance, and in the case of the United Kingdom it is supposed to take place every five years. The last FSAP exercise took place in 2015–16.

The near-term growth outlook remains strong, but so too are price pressures. Despite an expected mild slowdown in Q1 due to Omicron and associated restrictions, strong private demand should support continued growth in 2022, projected at about 4.7 percent. Inflation is expected to peak at about 7 percent in the Spring of 2022 before gradually returning to target by 2024Q2 (helped by declining global energy prices, more robust supply chains, and tighter demand management policies). In the medium-term, growth is projected to ease to about 1½ percent, with real GDP settling about 2–2½ percent below its pre-pandemic trend, held back by investment shortfalls in 2020–21 and a less-than-full recovery of labor force participation. Risks are considerable in the period ahead. There is a risk of higher inflation in the near term, but 2–3 years out, the risk shifts to lower growth (as policy interventions pull inflation back). However, the major risk stems from new Covid-19 waves and spillovers from tensions in Eastern Europe.

The United Kingdom operates a well-functioning financial stability framework with resilient banks and insurers. This framework—well-aligned with global standards—has helped support the safety and soundness of the core part of the UK financial system through the strains of Brexit and the COVID-19 shock. As outlined in the FSSA, practical use is being made of macroprudential policies. However, data and information gaps exist concerning non-bank financial institutions (NBFI) and their cross-border operations. Debtors, creditors, and market intermediaries face interlinked risks ranging from adverse macrofinancial effects of a prolonged pandemic, lingering post-Brexit uncertainties on financial services, and rapidly shifting financial conditions. Financial stability also remains highly sensitive to the interconnectedness of markets and cross-border risks. These, and issues relating to other ongoing financial sector transitions, are starting to pose a challenge for the financial stability authorities. Post-Brexit regulatory and related institutional reforms that are now being considered offer the opportunity to reaffirm the primacy of the authorities' objective of financial stability.

Executive Board Assessment[3]

Directors commended the authorities' strong policy measures and rapid vaccination campaign that helped contain the health, economic, and financial impact of the pandemic, which supported a faster than expected recovery. Directors noted that the near-term outlook remains strong but is subject to significant risks, including from emerging price pressures, medium-term scarring, and Covid-19 uncertainties.

Directors welcomed the Bank of England's recent policy rate increases as they saw the need to withdraw the exceptional monetary support provided during 2020–21 to counter growing inflation pressures. They supported moving the policy toward a more neutral

[3] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

setting while emphasizing that the pace of the policy withdrawal should weigh the risks to inflation and growth. In this regard, they emphasized that predictability and clear communications about forward guidance would improve policy effectiveness.

Directors emphasized that fiscal policy should retain an important role in responding to large macroeconomic shocks. They supported gradual fiscal tightening with well targeted support to protect households from the sharply rising cost of living. Given continued demand-supply imbalances, a few Directors saw scope for moving forward some fiscal consolidation while bolstering spending on Build Back Better priorities later, which would improve growth over the medium term. However, a few Directors questioned the political feasibility of this suggestion. Directors recommended further increasing fiscal automatic stabilizers by formalizing some well-targeted and effective pandemic programs to protect marginalized workers and small businesses. They welcomed the authorities' new fiscal rules and noted that a structured and timely commentary on alignment of proposed rules with overarching fiscal objectives would be helpful.

Directors welcomed the positive assessment of the effectiveness of the UK's financial stability framework reflected in the FSAP review and supported the report's recommendations. To manage potential systemic risk posed by complex cross-border financial firms, they emphasized the need to address data and information gaps, expand regulatory perimeters, and enhance international coordination, especially on non-bank financial institutions. Directors also called for continued vigilance on housing market risks and the use of macroprudential measures. They encouraged the continued proactive approaches on the future regulatory framework, LIBOR transition, green finance, and cyber threat related risks, and securing institutional safeguards for preserving financial stability and market integrity.

Directors commended the authorities' "Build Back Better: Our Plan for Growth" agenda to facilitate structural transformation for green, inclusive growth. They supported efforts to further scale up public investment and strengthen active labor market policies, building on experience gained. Directors welcomed the ambitious Net Zero Strategy and encouraged the authorities to hone it further as necessary to deliver their targets. On implementing the EU-UK trade agreement, Directors urged continued engagement of both parties to find mutually beneficial solutions.

United Kingdom: Selected Economic Indicators

	2018	2019	2020	2021 Est.	2022 Projections	2023 Projections
Real Economy (change in percent)						
Real GDP	1.7	1.7	-9.4	7.2	4.7	2.3
Private final domestic demand	1.8	1.0	-10.7	4.9	7.4	2.3
CPI, period average	2.5	1.8	0.9	2.6	6.3	3.1
CPI, end-period	2.1	1.3	0.6	5.4	5.0	2.2
Unemployment rate (in percent) 1/	4.1	3.8	4.5	4.5	4.3	4.2
Gross national saving (percent of GDP)	14.0	15.3	14.0	13.8	13.3	13.6
Gross domestic investment (percent of GDP)	17.9	18.0	16.7	17.2	17.9	18.0
Public Finance (fiscal year, percent of GDP)						
Public sector overall balance	-2.0	-2.5	-14.9	-7.7	-3.1	-2.2
Public sector cyclically adjusted primary balance (staff estimates)	-0.8	-1.3	-11.5	-5.6	-2.4	-1.3
Public sector net debt 2/	78.9	84.1	96.6	93.7	91.2	91.5
Money and Credit (end-period, 12-month percent change)						
M4 3/	2.1	3.8	13.5	6.9	...	...
Net lending to private sector 3/	3.6	3.2	3.7	3.0	...	...
Interest rates (percent; year average)						
Three-month interbank rate	0.7	0.8	0.3	0.1	...	...
Ten-year government bond yield	1.5	0.9	0.3	0.8	...	...
Balance of Payments (percent of GDP)						
Current account balance 4/	-3.9	-2.7	-2.6	-3.4	-4.7	-4.3
Trade balance	-1.3	-0.9	0.1	-1.1	-2.4	-2.1
Net exports of oil	-0.1	-0.1	0.1	0.1	0.1	0.1
Exports of goods and services (volume change in percent)	2.8	3.4	-13.9	-1.4	3.9	8.5
Imports of goods and services (volume change in percent)	3.1	2.9	-15.9	2.4	9.7	7.3
Terms of trade (percent change)	0.2	0.8	1.1	-0.6	0.6	0.4
FDI net 4/	-0.2	-1.8	-3.0	1.0	0.8	0.2
Reserves (end of period, billions of US dollars)	176.6	182.7	186.7	203.7	...	...
Exchange Rates						
Exchange rate regime						Floating
Bilateral rate (December 31, 2021)						USD$1= £0.7420
Nominal effective rate (2010=100, year average) 3/	97.9	97.7	98.1	102.4	...	...
Real effective rate (2010=100, year average) 3/	98.8	98.4	98.6	102.4	...	...
Memorandum items:						
Nominal GDP (billions GBP)	2,174	2,255	2,153	2,333	2,591	2,736
Nominal GDP (billions USD)	2,905	2,880	2,762	3,211	...	...

1/ ILO unemployment; based on Labor Force Survey data.
2/ Public sector net debt is defined as public sector gross debt minus liquid assets held by general government and non-financial public corporations. It includes operations from Bank of England. The fiscal year begins in April. Debt stock reported in this table has been transformed into calendar year by using end-of-fiscal year information on debt and centered-GDP as a denominator.
3/ 2021 values are estimated using November data.
4/ Historical annual series available until 2020.

INTERNATIONAL MONETARY FUND

UNITED KINGDOM

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

February 1, 2022

KEY ISSUES

Context and Outlook. The UK's rapid vaccination campaign enabled it to start to reopen the economy in the Spring of 2021. With highly accommodative policies, the recovery has been faster than expected. However, capacity constraints and rising price pressures have emerged while new Covid-19 variants have raised new uncertainties. The government has allowed all initial pandemic support programs to sunset but has loosened near-term fiscal policy while specifying a back-loaded medium-term consolidation plan. With continued above-target inflation readings, the BoE made a first move to raise the policy rate in December. Macroprudential policies are returning to more standard risk settings. The near-term growth outlook remains strong, but so too are price pressures, while the financial cycle remains ahead of the economic cycle. The pandemic and Brexit have magnified structural challenges. Real GDP would remain below its pre-pandemic trend by about 2–2¼ percent in the medium term. Risks are considerable in the period ahead, centering on new Covid-19 waves and spillovers from tensions in Eastern Europe.

Policies. To address near-term capacity constraints and rising price pressures, manage financial sector risks, and reduce scarring over the medium term, policies should focus on the following four priorities:

- *Continued rotation of policies to support strong non-inflationary growth*. Monetary policy needs to withdraw accommodation to guard against risks of high inflation becoming more embedded, fiscal policy also has a role to play in addressing lingering Covid-related supply-demand imbalances, while continued vigilance is needed in respect to macroprudential policies, given the wider landscape for risk-taking.

- *Adjustments to policy design to better manage volatility, including due to Covid*. This would include strengthening fiscal automatic stabilizers, better defining when and how to deploy exceptional fiscal support, adapting the monetary policy operational approach to a different environment going forward, and addressing key financial stability and market liquidity issues identified by the FSAP.

- *Strengthening the policy framework to ensure anchoring and secure policy space*. This would include supporting the new and generally well-designed fiscal framework

with requirements for analysis of the macro-fiscal implications of newly formulated rules; making the BoE's quantitative tightening strategy more predictable; and addressing FSAP recommendations to continue strengthening financial regulation and supervision.

- *Further accelerating the "Build Back Better: Our Plan for Growth" agenda*. The government made significant progress in articulating strategies in 2021, but the difficult task of implementation now lies ahead. There are opportunities to further accelerate public investment and the Net Zero strategy, while challenges related to "leveling up" and settling the post-Brexit trade and financial sector framework must be dealt with.

Approved By
Laura Papi (EUR) and Uma Ramakrishnan (SPR)

The virtual mission took place during November 29–December 14, 2021. The staff team comprised M. Flanagan (head), A. Ari, R. Chen, C. Mulas Granados (all EUR), and R. Bouis (MCM). U. Das, J. Sole (both MCM), mission chief and deputy mission chief of the FSAP team, B. McDonald, and E. Van Heuvelen (both SPR) joined a subset of meetings. D. Garcia-Macia (FAD) and S. Mishra (Intern) contributed to the report. The mission met the Chancellor of the Exchequer, the Governor of the BoE, the Chief Executive of FCA, senior HMT and BoE officials, bank analysts, and think tanks. A wrap-up meeting involving the Managing Director, Chancellor, and Governor took place on December 14, followed by a press conference. G. Li and R. Vega (both EUR) supported the mission. UK Executive Director Ms. Riach, Alternate Executive Director Mr. Ronicle, and Mr. Chrimes (OED) participated in the discussions.

CONTENTS

TABLES

ANNEXES

Glossary

ALMP	Active Labor Market Policy
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
BoE	Bank of England
CCC	Climate Change Committee
CCP	Central Counterparty
CCyB	Counter-Cyclical Capital Buffer
CET1	Common Equity Tier 1
C-PIMA	Public Investment Management Assessment Climate Module
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CRE	Commercial Real Estate
EC	European Commission
ECL	Expected Credit Loss
ETS	Emissions Trading System
FCA	Financial Conduct Authority
FPC	Financial Policy Committee
FSAP	Financial Sector Assessment Program
FSSA	Financial System Stability Assessment
FTA	Free Trade Agreement
FY	Fiscal Year
GFC	Global Financial Crisis
GFN	Gross Financing Needs
IT	Inflation Targeting
LTI	Loan to Income
MAC DSA	Debt Sustainability Analysis for Market-Access Countries
MMF	Money Market Fund
MoU	Memorandum of Understanding
MPC	Monetary Policy Committee
NBFI	Non-Bank Financial Institutions
NIIP	Net International Investment Position
OBR	Office for Budget Responsibility
OECD	Organisation for Economic Co-operation and Development
O-SII	Other Systemically Important Institutions
PIT	Personal Income Tax
PMI	Purchasing Managers' Index
QE	Quantitative Easing
QT	Quantitative Tightening
R&D	Research and Development
RAM	Risk Assessment Matrix
SMEs	Small and Medium-Sized Enterprises
TCA	Trade and Cooperation Agreement
TFP	Total Factor Productivity
VAT	Value-Added Tax
WTO	World Trade Organization

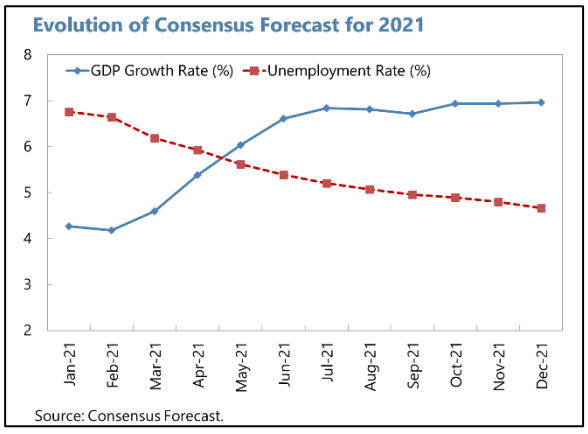
BACKGROUND

1. The UK entered 2021 struggling with a second Covid-19 wave, but with several positive developments to build on. After being one of the countries worst hit by Covid-19 in terms of cases, deaths, and economic contraction, an ambitious vaccination campaign was just beginning. Support measures that helped contain the crisis impact during 2020 had been extended, the Bank of England (BoE) had implemented additional quantitative easing (QE), and financial conditions had further eased (Figure 1).[1] Moreover, the EU-UK Trade and Cooperation Agreement (TCA) had just been concluded.[2]

2. At the same time, several critical challenges loomed. Covid cases were spiking again under the weight of an early 2021 second wave, creating health, fiscal, and economic impacts. Elements of the post-Brexit framework were left unsettled (most notably for the financial sector and implementation of the Northern Ireland Protocol). Policy frameworks were under review. The policies to deliver the UK's ambitious climate targets had not yet been spelled out, and the challenge of building competitiveness and growth in living standards for all citizens remained, with the additional complication of likely post-pandemic structural transformations.

RECENT DEVELOPMENTS

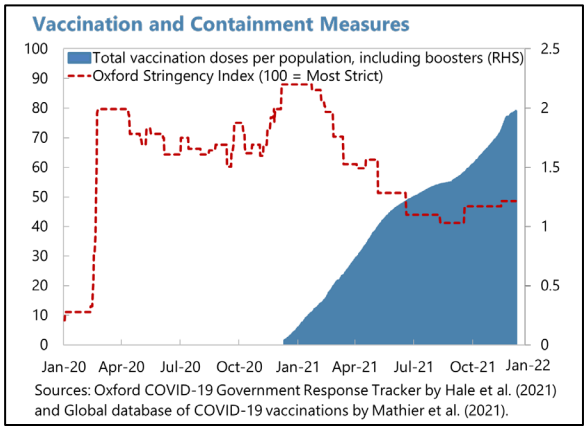
3. The recovery has proceeded faster than expected in 2021, but with Covid-Omicron introducing some recent turbulence (Figure 2, Table1). Additional fiscal support and a rapid vaccination campaign (which allowed the economy to begin reopening in the spring) powered a recovery on the back of strong private consumption and investment. By November, the economy had exceeded its end-2019 output level, with services having surpassed their pre-pandemic level by 1½ percent and manufacturing remaining about 1½ percent below. The labor market has also proven more resilient than expected, with unemployment at 4.3 percent in Q3 (far below the 7 percent projected a year ago and just above the pre-pandemic level), employee numbers above pre-pandemic levels, and no uptick in job losses after the end of furlough in September. Some moderation in the growth momentum was expected in Q4 as the benefits of reopening faded, and the Covid-19 Omicron variant appears to have accentuated this (with a drop in the services PMI to 53.6 in December).



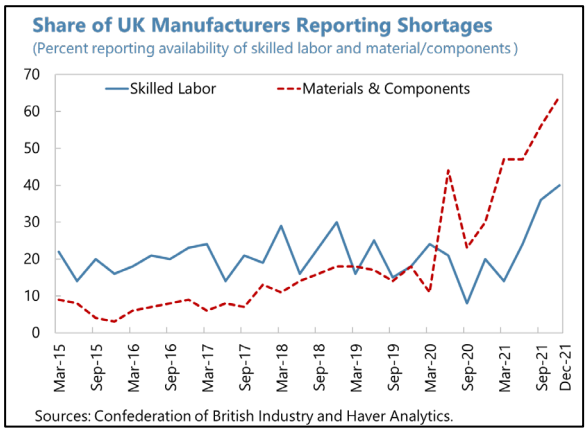
[1] See also the IMF's policy tracker (https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#U).
[2] See https://www.gov.uk/government/publications/ukeu-and-eaec-trade-and-cooperation-agreement-ts-no82021.

4. Supply constraints and price pressures have emerged.

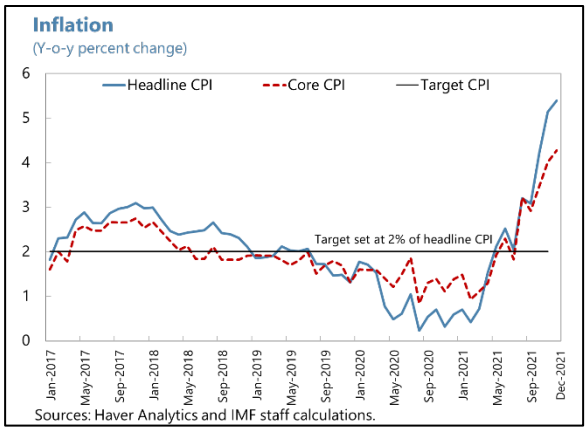
- **Covid and related health measures have lasted longer than expected**. Containment measures were largely eased by end-July, but the Omicron variant caused a surge in new infections in December, leading to a re-introduction of some health restrictions (such as an expanded mask mandate and work from home advisory) and an accelerated vaccine booster campaign, but no large-scale lockdowns. Daily new cases peaked just below 220,000 in January 2022 (at about three times the previous peak in January 2021). Although the increases in death and hospitalization rates were contained well below previous Covid waves, the high case count led to a spike in work absences. As Omicron faded in late January, the authorities announced the lifting of nearly all remaining Covid restrictions.



- **Behavioral changes due to Covid have contributed to supply constraints**. The pandemic has shifted UK demand from services to goods and reduced the labor force through a drop in participation and by exacerbating the impact of Brexit on net migration (Figure 3 and 4). Against a backdrop of strained global supply chains and some Brexit-related reorientation of trade (see ¶9 below), UK surveys show historically lengthy supplier delivery times and backlogs of work, significant material shortages in a number of sectors, lower than normal levels of inventories, and record-high unfilled job openings, all suggesting that the economy bumped up against (short-term) capacity constraints in Q4.

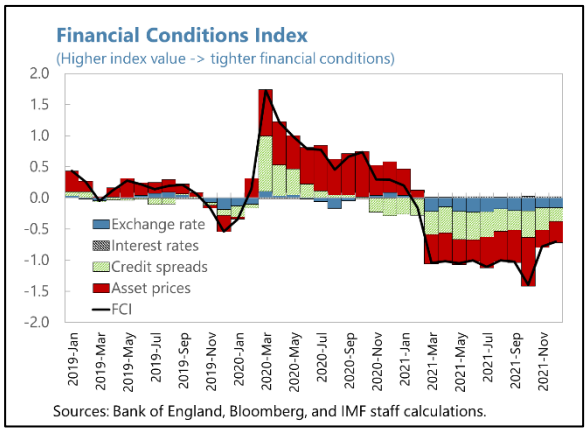


- **The supply constraints have led to a build-up of price pressures** (Figure 5). Consumer prices in December rose by 5.4 percent headline and 4.2 percent core y-o-y. The surge reflects elevated energy prices, but signs of second-round effects have been emerging (with services inflation climbing to 3.4 percent in December from 2 percent in Q1–Q3). In the background, tight labor markets with high turnover and record levels of vacancies have



contributed to solid wage growth since June, at about a 3½–4 percent underlying rate, with a 6½ percent increase in the minimum wage pending. Importantly, energy price developments have not yet fully filtered into regulated retail prices, with a next step increase scheduled for April 2022.

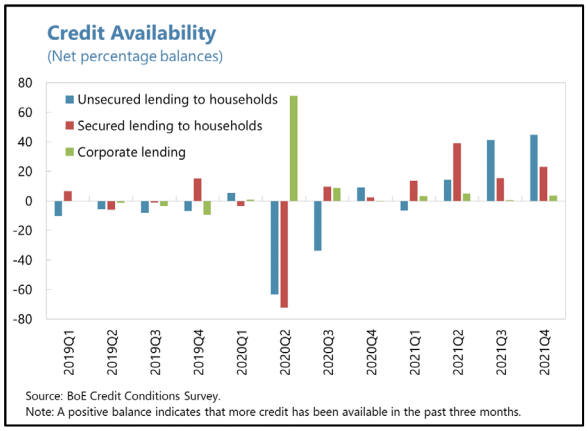
5. Financial conditions became very accommodative during 2021 and private balance sheets have emerged from the pandemic mostly in strong shape, but there are some areas of vulnerability:[3]



Sources: Bank of England, Bloomberg, and IMF staff calculations.

- **Financial conditions** have been very supportive during 2021, driven by compressing credit spreads and buoyant asset prices. Spread compression has been notable in mortgage markets, particularly as the QE program has created ample liquidity in the domestic banking system.

- **Lending activity has been brisk but has shifted**. The credit-to-GDP gap rose to close to zero for the first time in a decade in early 2021 but fell back slightly in Q2 as GDP recovered. Corporate lending has slowed, with larger corporates repaying bank loans and issuing more equity and bonds, and SMEs debt continuing to reflect government-guaranteed loan schemes but facing more stringent eligibility criteria. Meanwhile, the availability of mortgages for households has increased, and while housing prices have boomed, red flags are not yet visible (Figure 6 and 7). Likewise, developments in commercial real estate (CRE) do not indicate any significant overvaluation or macrofinancial fragilities at present (Figure 8). Consumer credit has been subdued (Figure 6) but conditions have improved in recent quarters (Text Figure). The latest lending survey in January 2022 also suggests that corporate credit availability remained unchanged in 2021Q4 while the availability of secured credit to households improved further.



Source: BoE Credit Conditions Survey.
Note: A positive balance indicates that more credit has been available in the past three months.

- **Private balance sheets** have emerged from the pandemic stronger than during the post-GFC period, but with some pockets of vulnerability (Figure 9). Households have benefited from increased cash positions and housing values, although much of the new savings are concentrated among the top two income quintiles and the lowest income quintile has the highest mortgage vulnerability. Overall, corporate leverage has continued declining and the

[3] The UK underwent the IMF's Financial Stability Assessment Program (FSAP) in 2021. See the accompanying UK Financial System Stability Assessment (FSSA) for further details on financial sector issues.

estimated SME equity gap, at one percent of turnover, is much lower than estimated a year ago. However, the number of companies at risk of a fall from investment grade is elevated (at triple pre-pandemic levels), and there are pockets of vulnerabilities in contact-intensive sectors and SMEs (which may be exposed now that government support programs have largely sunset).

6. Banks appear healthy, but the large NBFI sector remains a source of risk (Figure 10, Table 2):

- The aggregate CET1 ratio of major **UK banks** crept further upwards through 2021Q3 to 16.5 percent, and banks continue to have ample liquidity and healthy leverage ratios. The BoE's 2021 Solvency Stress Test suggests that their balance sheets are generally robust to risks, but market risks could increase significantly in the event of a sharp rise in global interest rates and sharp asset price corrections. The FSAP stress tests confirm that major banks have sufficient capital and liquidity buffers to withstand severe adverse shocks. Of note, UK banks have maintained high capital ratios despite released buffers, possibly reflecting caution about recognizing losses in the future and signs in surveys that credit demand has weakened of late.

- **NBFIs'** lending focuses on riskier markets, complements banks' lending, and appears less procyclical under stress scenarios. However, as pointed out by the FSAP, data gaps and the global nature of the sector limit the full analysis of potential systemic risks. UK NBFIs suffer several problems common to NBFI sectors internationally, including liquidity mismatch in MMFs and corporate bond funds, leveraged investors with poor preparedness to meet margin calls, and high risk taking in corporate bond and collateralized loan obligation markets.[4]

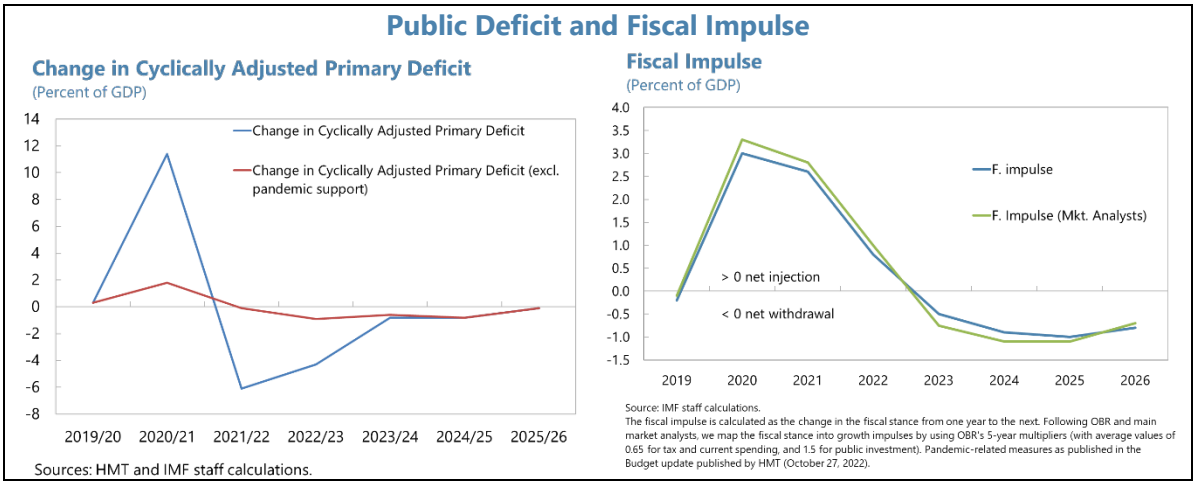
7. Policy has remained accommodative throughout 2021 while beginning to rotate, broadly in line with past staff advice (Figure 11, Table 3):

- **The government has transitioned to more targeted fiscal support, boosted near-term stimulus, and anchored fiscal policy around a medium-term consolidation plan**. In the March and October budgets (the latter informed by the 3-year Spending Review), the authorities better targeted remaining pandemic support to deeply affected sectors (via reduced business and VAT rates) and added new spending initiatives (to address post-pandemic health backlogs, embed climate spending needs, and fund training programs)(Table 4).[5] A host of tax measures would lift the tax-to-GDP ratio by about 2 percentage points to a 70-year high, facilitating medium-term consolidation while still allowing spending to settle at pre-2020 levels. Changes have overall been progressive. There would be a continued fiscal impulse in 2022, while fiscal withdrawal would begin in 2023 and be largest in 2024–25. Overall, the medium-term plan would reduce the deficit from about 8 to nearly 2 percent of GDP between FY21/22 and FY24/25 (with 3¾ percent of GDP accounted for by the sunset of pandemic support measures). Net

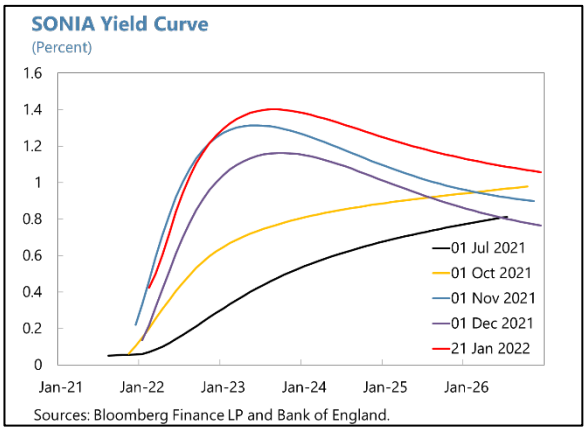
[4] See the October 2021 FPC Report: https://www.bankofengland.co.uk/-/media/boe/files/financial-policy-summary-and-record/2021/october-2021.

[5] The additional spending includes restoring foreign aid to 0.7 percent of GDP. In this context, the authorities have announced that they will channel 20 percent of their recent SDR allocation (SDR 3.86 billion) to the PRGT and RST.

public debt would fall by about 2 percentage points of GDP over the 5-year horizon (Table 5). Fiscal rules have been re-imposed to support this trajectory, focused on achieving a balanced current budget and a declining debt trajectory over a rolling three-year horizon (Section C and Table 10 discuss these in more detail).



- **Monetary policy has remained highly accommodative, only beginning to withdraw at end year**. For the first eight months of the year, the low 0.1 percent policy rate produced a shadow rate some 2–3 percentage points below the estimated neutral rate. The BoE also took technical steps to prepare the system for a negative policy rate, if needed. As inflation and expectations accelerated in September–October, the BoE transitioned to a more hawkish stance. This generated some turbulence in markets and some surprises. Nevertheless, in December, the BoE became the first G7 Central Bank to raise its policy rate (by 15 bps to 0.25 percent) and the SONIA curve is now anticipating a further 100 bps of rate hikes by end-2022. The BoE finished its quantitative easing program in December as planned and has announced a strategy for quantitative tightening (QT, covering no reinvestment once the policy rate hits 0.5 percent, and outright sales once the rate hits at least 1 percent, subject in each instance to "economic circumstances").



- **Key crisis-related exceptional financial sector measures have been wound down, and the authorities have begun to adjust macroprudential policy**. Drawing on the interim results of the 2021 BoE stress test, in late-June the authorities lifted all remaining guardrails governing capital distributions by large banks (though some other exceptional measures remain, including related to leverage ratio calculations and transitional arrangements to ECL accounting). With the full stress test results published in December 2021, the authorities further announced an increase of the counter-cyclical capital buffer (CCyB) rate from zero to one percent from

December 2022, judging that overall vulnerabilities had returned to their pre-pandemic standard level. Other Systemically Important Institutions (O-SII) buffer rates would remain at their December 2019 settings until at least 2023. To simplify their mortgage market measures, the authorities also announced an intention to remove the "affordability test" in 2022H1, subject to consultation.[6]

8. The authorities have made substantial progress in laying out the reforms needed for their "Build Back Better: Our Plan for Growth" program. The plan focuses on three pillars (infrastructure, skills, and innovation) to deliver three strategies (text table): (i) the leveling up agenda to deliver equal opportunities and quality of life throughout the UK (with policies focused on public investment in physical and digital infrastructure, public services in health care and education, and supporting local and innovative businesses); (ii) the Net Zero Strategy to deliver a decarbonized economy by 2050 (with specific plans to reduce emissions from each sector of the economy and offsetting remaining emissions with greenhouse gas removals);[7] and (iii) a Global Britain vision, including trade policy and regulatory reforms in the financial sector, to deliver domestic prosperity through deeper integration into the global economic and financial system.

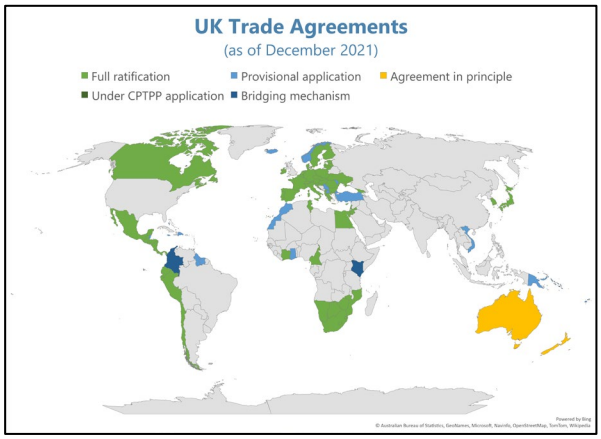
The Government's "Build Back Better: Our Plan for Growth"			
Key Policies	**Levelling Up the Whole of the UK**	**Supporting the Transition to Net Zero**	**Support the Vision for Global Britain**
Infrastructure	• Use the Levelling Up Fund, UK Shared Prosperity Fund, Towns Fund, and High Street Fund to invest in broadband, roads, rail, city transport, and local priority projects (through the Levelling Up Fund).	• £30bn funding for climate change priorities between 2021 and 2025, set out in the Net Zero Strategy and Spending Review 2021. • Of which, £500m for grants to install new home heating systems and replace boilers.	• Open new trade and investment hubs.
	• Utilize the new Infrastructure Bank to crowd-in private investment.		
Skills	Use the UK Shared Prosperity Fund to improve public services in education and skills in struggling regions, including a strong focus on improving adult numeracy.		• Various targeted high skilled visa reforms, alongside a global outreach strategy.
	• Increase traineeships and apprenticeships and improve quality. • Introduce a Lifetime Skills Guarantee to give access to education and training throughout lives, including free courses at upper secondary level in economically valuable areas and skills bootcamps linked to job vacancies in growth sectors.		

[6] The two mortgage measures are the "flow limit," setting new mortgage loans with loan-to-income ratios higher than 4.5 to 15 percent, and the "affordability test," specifying a stress interest rate (300 bps above the reversion rate) to assess borrowers' ability to repay a mortgage.

[7] For more information about the Net Zero Strategy see: https://www.gov.uk/government/publications/net-zero-strategy.

The Government's "Build Back Better: Our Plan for Growth" (concluded)			
Key Policies	**Leveling Up the Whole of the UK**	**Supporting the Transition to Net Zero**	**Support the Vision for Global Britain**
Skills	• Commitment to open 20 Institutes of Technology (IoTs) to provide technical qualifications. • Funding for additional hours in the classroom for 16–19 years old.		
Innovation	• Develop innovative hubs of high-value activity in core cities.		• Pursue regulatory reforms to unlock cutting-edge technologies and boost competition.
	• Increase public investment in R&D to £20bn a year by FY24/25, part of the government's objectives to increase R&D spending to £22bn by FY26/27 and economy-wide R&D investment to 2.4% of GDP in 2027. • Review of R&D tax reliefs. • Consult on measures to address barriers posed to pension funds when looking to invest in high-growth innovative companies. • Introduced £375m "Future Fund: Breakthrough" to address the scale up gap for innovative businesses and other equity products listed in Table 14. • Launch the Help to Grow program to support over 100k SMEs improve their productivity through management training and digital adoption.		
Source: https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth.			

9. Some progress in the post-Brexit framework has been made. Economic effects appear largely in the direction expected, for instance trade with the EU has declined. However, pandemic impacts complicate a full assessment, including due to additional interaction effects (most notably lower net migration) (Figure 12). On the trade policy front, the UK is engaging actively in the WTO, has signed or reached agreement in principle on new FTAs with Australia and New Zealand, and has applied to join the CPTPP. However, a dispute with the EU has lingered about implementing the Northern Ireland Protocol, with the UK threatening to trigger Article 16 (a trade safeguard mechanism) and the EU threatening retaliation, but negotiations continue. For the financial sector, the "New Chapter for Financial Services" laid out a vision, possible reforms to the current prospectus regime were put forward, a draft MoU on regulatory cooperation was agreed with the EU (but remains unsigned), and the EC has proposed to extend temporary equivalence for UK-based CCPs until mid-2025. A financial services regulatory framework review is now underway to ensure it delivers the government's vision for the financial sector outside the EU.[8]



[8] For more information see: New Chapter for Financial Services, UK Listings Review, Prospectus Regime Review, and the Future Regulatory Framework Review, First and Second Consultations.

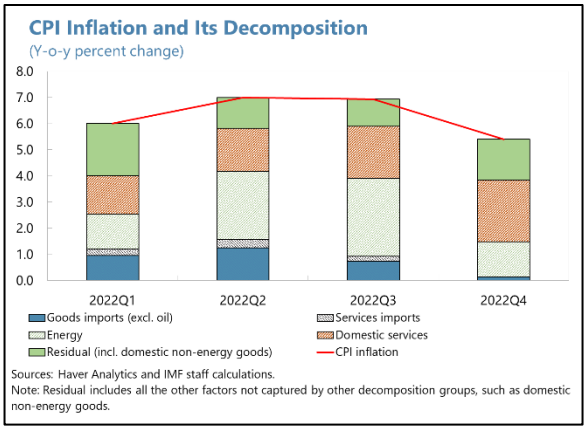
OUTLOOK AND RISKS

10. Staff's baseline foresees growth dropping from an estimated outturn of 7.2 percent in 2021 to 4.7 percent in 2022, elevated near-term inflation, and a subsequent economic slowdown as inflation is contained (Table 6):

- **Near-term growth**. A mild slowdown in Q1 due to Omicron and associated restrictions is expected to give way to several quarters of elevated growth. Private demand is expected to be very strong in 2022, as investment responds to tax incentives, inventories rebuild, residential building backlogs are cleared, and consumption remains strong, including due to a decline in the savings rate (Figure 13). This strong private demand would also lead to a further increase of the CA deficit to about 4.7 percent of GDP in 2022. Supply is expected to slowly expand, helped by the gradual return of workers from inactivity, the slow unwind of global logistics backlogs, and the normalization of energy input costs (Figure 14). The output gap would stay positive, and the labor market would remain tight (with wage settlements partly compensating for recent real wage erosion). Thereafter, growth would slow and the economy would converge towards its pre-pandemic potential growth rate of about 1½ percent over 2023–24. Demand would be restrained by fiscal adjustment (including sunsetting investment incentives) and the move of monetary policy to a more neutral setting during 2022 (see the text table for policy assumptions). A slowing economy and weakening labor market would begin to have sharper impacts on real income, while savings rate declines would run their course. Staff forecasts for 2022 growth are in line with consensus, which sits at 4.7 percent.

- **Medium-term output** would settle at 2–2¼ percentage points below the pre-pandemic trend by 2025, with labor supply held back by higher inactivity rates among older workers, lower net migration, and higher reservation wages (including due to a higher fiscal wedge); the capital stock lower than the pre-pandemic path due to foregone investment; and TFP held back by a period of reduced on-the-job learning and knowledge spillovers (Annex I). However, the better performance of the economy in 2021 has mitigated all of these channels, and the estimate is a substantial improvement relative to the 4–5 percent expected a year ago.

- **Inflation** is expected to peak around 7 percent during the spring of 2022 when regulated energy price increases kick in and remain elevated as global supply-chain constraints and post-Brexit border controls force up import costs and as tight labor markets and second-round effects lead to broader wage and price pressures. Inflationary pressures would gradually decline as energy prices normalize, supply-side constraints slowly unwind, and short-term demand momentum fades. Inflation is projected to return to the 2 percent target by 2024Q2.



Assumptions about the Authorities' Policies	
Policy Area	**Assumptions**
Fiscal	• Policies as articulated in the FY21/22 Budget and Spending Review. Tax and spending measures and fiscal adjustment path as announced.
Monetary	• Further 75–125 bps increase (in line with markets' expectations). • Balance sheet management as announced: balance sheet reduction to commence per stated plans involving non-reinvestment of maturing assets once the policy rate reaches 0.5 percent in spring 2022, and gradual asset sales starting in early 2023, some time after the policy rate reaches 1 percent.
Macroprudential	• The CCyB rate will remain at zero percent until December 2022 and then increase to 1 percent, gradually as the financial cycle evolves towards 2 percent. • O-SIIs rates will remain at the levels set in December 2019 until December 2023.
Structural	• Increased funding for retraining and public investment per the budget. • Climate policies per net zero plan, including £30bn in green public investment and £500m in grants to household heating systems. • Growth-enhancing policies per "Build Back Better: Our Plan for Growth" agenda (see Text Table above). • Continued slow progress in addressing the various behind-the-border administrative problems post-Brexit. Continued slow progress in trading partners and blocks.

11. Risks to the outlook are considerable in the period ahead (see also the RAM, Annex II). Staff sees the balance of risks favoring higher inflation in the near term and lower-than-forecasted growth in the medium term. However, tensions in Eastern Europe have added a new layer to these risks:

- In the **near term**, there is a risk that stronger-than-projected domestic demand interacting with continuing supply-side constraints (including due to a resurgence of the pandemic) lifts inflation further, pushing medium-term expectations upwards (and there have already been moves in this direction, unlike previous episodes where the BoE was successful in seeing through inflation spikes (Figure 15)).

- In the **medium term**, it may prove difficult to return to the inflation target without a period of compressed incomes and below-average growth, and global monetary policy developments could accentuate a slowdown by reducing external demand. Problems originating in the UK financial sector, including due to disruptive financial transitions (see the FSSA Section V) could activate macro-financial feedback loops and also amplify any slowdown. Meanwhile, trade problems with the EU and higher domestic adjustment costs to structural transformations may increase scarring and even reduce potential growth.

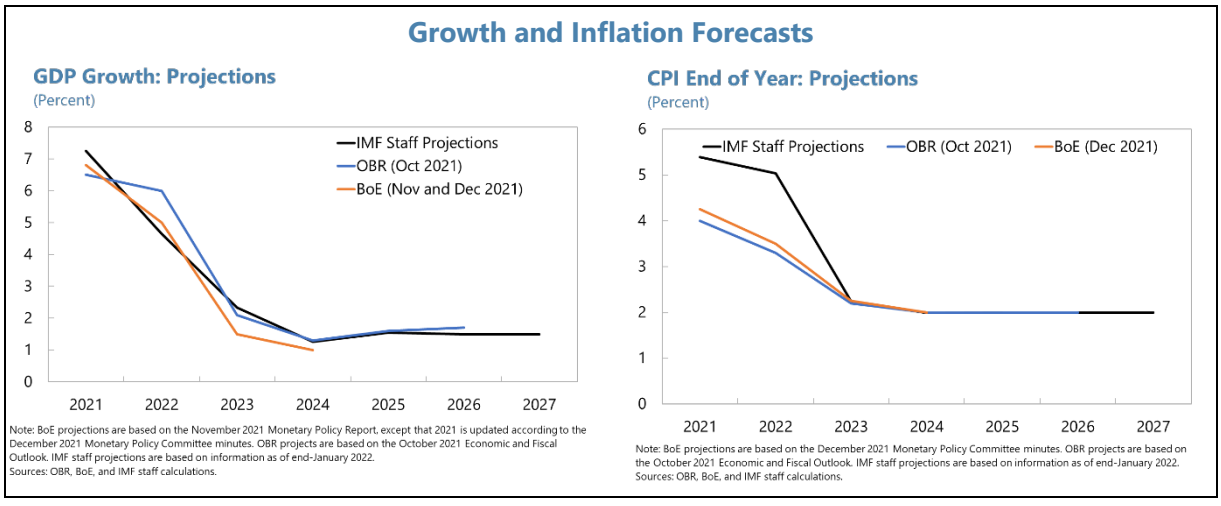
- **Tensions in Eastern Europe have added an additional layer to these risks**, with potential implications for the UK through higher energy prices and via economic slowdowns in major European trading partners (the UK has limited direct trade and financial linkages with Russia and Ukraine). Indirect impacts could be felt through financial market channels. The overall impact would tend toward further exacerbating inflation pressures but weakening the growth outlook.

12. Taking into account both the baseline and risks, external and public debt vulnerabilities appear contained, but with some tensions and risks:

- The external position in 2021 is preliminarily assessed to be weaker than the level implied by fundamentals and desirable policies (Annex III and IV; Table 7 and 8). The UK's major external vulnerabilities are linked to high gross external debt, although net external debt remains low. Exchange rate flexibility represents an important risk mitigation mechanism in the UK (with a depreciation improving the NIIP).

- The MAC DSA suggests an overall low risk of sovereign stress, with some vulnerabilities in downside scenarios (Annex V). The domestic banking sector appears to have the capacity to absorb residual financing needs in most scenarios (given NBFI gilt take-up at historical rates). In downside scenarios (especially where QT is needed to address inflation), gilt yields may need to rise further to induce banks and non-banks to lift their gilt holdings to historically large shares. Given the long maturity of the UK's gilt stock, however, the impact on public finances appears manageable. Overall, staff continues to assess that the authorities have fiscal space.

13. ***Authorities' Views***. The BoE's near-term outlook was similar to staff's, while the Office for Budget Responsibility (OBR) projected higher growth in 2022, expecting even stronger private consumption and investment. Both institutions had estimated a positive output gap that gradually closes over 2023–24 and inflation that gradually returns to the 2 percent target by early 2024. Both had revised down their scarring estimates while considering the implications of the decline in labor market participation rates of those aged 50 and above. The authorities acknowledged the large uncertainties associated with Omicron and its potential impact in the short run on activity and implications for inflation, but they were confident that increased adaptation and targeted policy support would limit its economic impact. On the external sector assessment, the authorities commented that their models mechanically indicated a current account and exchange rate closer to being in balance. On public debt, the authorities welcomed the exploratory analysis using the new MAC DSA. They are monitoring risks and noted that some scenarios could produce pressures.



POLICY DISCUSSIONS

14. The over-arching policy objectives are to support a robust recovery in the near term and advance structural transformation over the medium term. To achieve these objectives: (i) the near-term policy mix needs to be calibrated to address supply-demand imbalances and elevated inflationary pressure; (ii) policies also need to be optimized to cope with greater volatility, which may extend beyond the near term; (iii) already robust policy frameworks can nonetheless be refined to further secure policy space and preserve strong anchors; and (iv) comprehensive and ambitious "Build Back Better: Our Plan for Growth" plans need to overcome barriers which may hold them back. These four imperatives provided the themes for the discussions.

A. Near-Term Macroeconomic Management Priorities

15. The current conjuncture poses a challenge for the policy mix. Monetary policy can address rising inflationary risks over a 12–24 month horizon but cannot tackle short-run supply disruptions (due to Covid or energy market developments) and is not the right tool to manage financial sector risks. Moreover, leaning on it alone to address the demand-supply imbalances prevalent at the end of 2021 (and expected to continue) would likely require an overshoot of the policy rate and disproportionate impacts on investment and net exports. On the other hand, fiscal policy can play an important role in addressing the distributional impacts of inflation, and while generally not an effective short-run demand management tool (due to recognition, policy formulation, and implementation lags), can help address demand-supply imbalances at a lower frequency, potentially relieving pressure on monetary policy to overshoot. Meanwhile structural policies can deliver greater supply-side resilience, but with most of the impacts likely accruing in the medium term (see Section D). These considerations informed staff advice.

16. Staff supported the BoE starting a rate tightening cycle and emphasized the need to move monetary policy to a more neutral setting to help contain growing inflation risks. Noting the still heavily accommodative stance of policy (¶7) and assessing risks to inflation to the upside, staff had suggested that the Bank Rate be steadily adjusted towards a neutral setting (estimated to vary between 1 and 1½ percent) to support the return of inflation to target by 2024Q2. However, staff noted that high uncertainty would require continuous review of the needed adjustment. Given the shadow of Covid-19 and potentially disruptive energy market developments, the pace of adjustment should be a matter of risk management, balancing the risks of slowing the recovery and de-anchoring of inflation expectations. Staff noted that key indicators to watch would be upcoming wage settlements, corporate pricing intentions, survey and market-implied inflation expectations, and option market probabilities of high inflation (all of which flashed red at present, per Figure 15). Staff also noted that initial steps would still leave policy accommodative and monetary policy would take 12 to 24 months to reach its maximum impact, mitigating risks to the recovery from initial steps. Clearly communicated forward guidance would have an important role to play in limiting the proliferation of second-round effects.

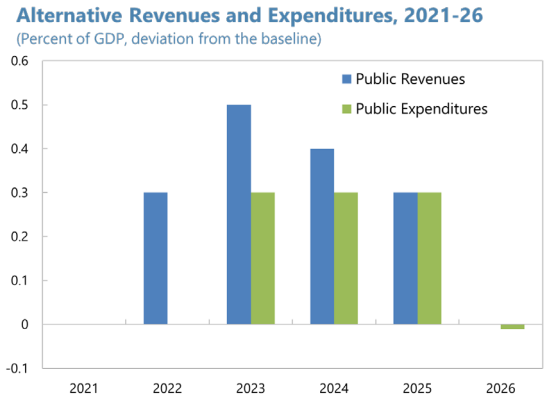
17. Staff argued that fiscal policy should retain an important role in responding to the present conjuncture. While recognizing the authorities' work to set out a medium-term fiscal framework (¶7), staff encouraged flexible implementation of policy within this:

- An immediate concern is to protect those vulnerable to the impact of a sharply higher cost of living. Measures in the recent budget have helped to this end, including an increase in the minimum wage and a reduction in the Universal Credit taper rate. Going forward, the pending increase in energy prices poses a particular challenge given the impact on household budgets. Staff advised the government to let prices reflect the higher cost of energy, while revamping existing schemes to increase targeted support. For example, the authorities could expand the "warm homes and winter fuel allowance" (e.g., doubling it from currently £140 to about £300 per low-income household, costing around £1 billion) or reinstate part of the Universal Credit uplift, and pay for the associated cost via the existing large budget contingency. Staff noted that a temporary cut in the VAT rate on household energy (e.g., from 5 percent to zero) would be costly (about £2.5 billion) and less targeted and would have only a small impact on inflation. Meanwhile tightening the energy price cap (with or without guaranteed loan support) would be similarly less targeted and would decapitalize energy suppliers, in effect delaying the problem to later.

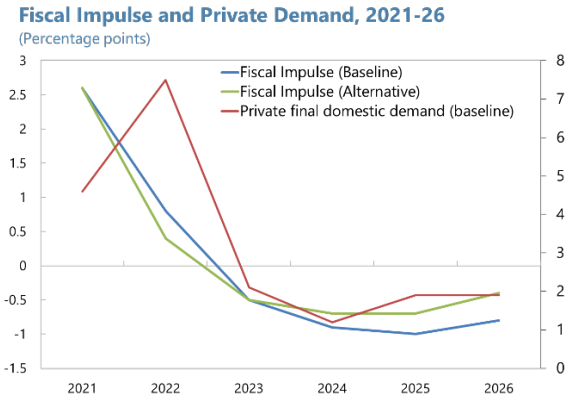
- The upcoming March fiscal review will provide an opportunity to address the larger picture of lingering demand-supply imbalances. Staff argued that there were two key routes through which this could be done without re-opening the just-completed Spending Review. First, the authorities could consider sequencing the fiscal package differently, by raising more revenues now and investing more later in a more ambitious "Build Back Better: Our Plan for Growth" agenda (see text chart, and Section D below). This would also have the benefit of reducing medium-term growth risks by reducing the fiscal drag in the outer years. Second, the authorities

Fiscal Policy Scenarios

An earlier increase in public revenues, followed later by additional "Build Back Better: Our Plan for Growth" expenditures, would reduce the deficit, ...



...while spreading the fiscal impulse more evenly and countering strong private demand in the near term and compensating weaker demand in the medium term.



Source: IMF staff calculations.

could consider measures that shift consumption to the future, targeting those taxpayers who have benefitted most from the pandemic (and who are thus most likely to consume). This could be done by raising windfall or wealth taxes now and pre-announcing subsidies for future green investment (e.g., VAT cuts), and/or by incentivizing savings accounts for future green spending.

18. Staff underscored the message from the FSAP that macroprudential policy should remain vigilant about systemic risks (see the FSSA Section IV). The financial cycle appears to be slightly ahead of the economic one, and with real rates low and financial conditions loose, financial stability risks could build as investors search for yield and mortgage lending grows. Against this backdrop, staff supported a gradual reestablishment of the CCyB rate towards two percent and encouraged further steps as needed to preempt developments of a systemic nature. Staff also saw the rationale for simplifying the mortgage market measures. These have been broadly effective in containing the buildup of household debt and limiting the number of highly indebted households, but the affordability test in itself has contributed little at the margin (Figure 7). Still, some pressures could appear as income support measures are removed and should downside risks to the outlook materialize. Vigilance about housing market developments thus remains in order. It will be necessary to continue to analyze the effectiveness of the remaining measures, detect leakages early, while bank stress test design must continue to capture housing market correction risks and related systemic risk contagion channels.

19. ***Authorities' Views***. The authorities took a conventional approach to the policy mix, with monetary policy set to manage demand to meet the inflation target and fiscal policy set to address structural issues while preserving sustainability. On fiscal policy, they recognised the pressures people are facing because of the rising cost of living, calculating the support already given at £12 billion this fiscal year. They will continue to balance protecting the most vulnerable consumers, targeting support so it is proportionate, and minimizing as much as possible the risk of second-round inflationary effects. On monetary policy, during the December Article IV discussions, the BoE recognized that a tight labor market and risks of a further drift up in medium-term inflation expectations favored policy tightening but noted that the spread of Omicron raised the value of waiting. In the December meeting, the MPC voted for the former course. For macroprudential policy, the authorities judged the risk environment to be at a standard level overall. Consistent with that the FPC had begun to raise the buffer rate, noting that it could be met with existing capital rather than requiring major UK banks to strengthen their capital positions. On mortgages, they noted that their simulations suggested that, on current evidence, the LTI flow limit, without the affordability test but alongside the FCA's affordability testing under its Mortgage Conduct of Business framework, ought to deliver an appropriate level of resilience to the UK financial system, but in a simpler, more predictable, and more proportionate way.

B. Managing Policies under Greater Volatility

20. The macroeconomic landscape is likely to continue to be volatile going forward. Covid may become endemic, and in a virulent form could require mandated closures. Tensions in Eastern Europe could feed through to commodity and potentially financial markets. Moreover, as the

economy adjusts to new post-pandemic and post-Brexit norms and undergoes an energy transition, labor and capital reallocations across sectors may not be smooth. At the same time, some endogenous stabilizing mechanisms for the UK, such as net immigration and imports, may be less potent post-Brexit. Shorter economic cycles with greater impact from supply-side disturbances may manifest. Financial market measures of expected inflation indeed appear to be pricing some combination of higher inflation and risk due to volatility. Against this backdrop, flexible and responsive policies will be needed, and the UK has a strong track record of delivering this. However, macroeconomic disturbances may not always be immediately visible like the GFC or pandemic. The standard solution to recognition lags is optimizing policy design to build in the best automatic responses.

21. Fiscal policy has a key role to play in addressing volatility through automatic stabilizers.[9] Given the UK's fiscal space, a stronger fiscal stabilization policy would be feasible. The changes enacted in the Spending Review will strengthen automatic stabilizers through increasing income tax and national contributions. Staff estimates that this will allow the UK's automatic stabilizers to offset about 65 percent of market income shocks, versus up to 80 percent for some advanced economies, placing the UK slightly above the middle of the OECD rankings.[10] The authorities are now evaluating the exceptional pandemic-era support policies.[11] Staff's review suggests opportunities to further enhance automatic stabilizers by building on certain pandemic programs and a need to clarify when more exceptional support programs should be brought back, if at all (Table 9):

- The critical area to focus on to improve automatic stabilizers should be the pandemic-era programs aimed at protecting marginalized labor market participants and small businesses. These are the economic agents that bear the highest costs from recessions, have the least means of protecting their livelihoods, and who consequently tend to have high marginal propensities to consume and invest. In this context, staff recommended retaining the business rates relief, but refining the approach to better target viable companies experiencing temporary problems by using turnover data. Staff also suggested more automatic increases in funding for active labor market policies (ALMPs) tied to the cycle while preserving some discretion to adapt their design (e.g., tailored to specific sectors affected by each shock). For example, in Denmark, the Netherlands, and Switzerland, the budget for labor market services and active labor market measures automatically increases in line with rising unemployment.[12]

- Staff argued that, in the event of a virulent Covid wave requiring widespread mandated closures, the authorities should be ready to redeploy a subset of the most successful Covid programs (such as a furlough scheme, the Universal Credit uplift, and other targeted support to the most

[9] See Blanchard and Summers (2019); Boushey, Nunn, and Shambaugh (2019); Furman and Summers (2020).
[10] See Maravalle and Rawdanowicz (2020): "How Effective are Automatic Stabilizers in OECD Countries."
[11] To ensure transparency and accountability of Covid-related spending, the National Audit Office is doing a full review of the design, cost and effectiveness of pandemic programs. See: https://www.nao.org.uk/covid-19/. These policies included provisions with a broader governance impact, including making beneficial ownership information a condition for central government procurement.
[12] See the OECD's report on Scaling up policies that connect people with jobs in the recovery from COVID-19.

vulnerable households and small businesses), but with due attention to lessons learned about their design (including tapering and timely sunset). However, these pandemic-era support measures should not be part of the automatic stabilizers' toolkit, as adverse impacts on labor and capital allocation incentives give them too high a cost for "normal" recessions. Instead, a program like the Coronavirus Job Retention Scheme would be more suitable for responding to large, temporary, and non-structural shocks (like pandemic lockdowns) where disincentives are not a primary concern. Similarly, business loans with 100 percent government guarantees (like the Bounce Back Loan Scheme) should be reserved only for extreme conditions when ordinary financial intermediation is not functioning. Staff urged the authorities to delimit the circumstances where such programs would be used to help condition public expectations appropriately.

22. Monetary policy also has an important role to play in managing volatility but will have to navigate difficult trade-offs. Under its remit as clarified in 2013, the BoE has the discretion to manage the path of inflation to its target, including by seeing through large and/or persistent shocks (such as relative price and wage adjustments, to avoid running up against nominal rigidities and raising the sacrifice ratio). However, this flexible IT framework has never had to cope with an extended period of supply-side disruptions, and the BoE's ability to see-through shocks could be constrained by the need to keep inflation expectations anchored. Periods of high and volatile inflation have historically been associated with stronger pass-through of relative price shocks through second-round effects (likely reflecting weaker anchoring).[13] This, together with a potential steepening of the Phillips curve post-pandemic (Annex VI) and difficulties in accurately measuring the output gap during periods of turbulence, would call for the policy rate to become more responsive to the inflation gap.[14] It would therefore be important to avoid inaction bias, and careful communication would be needed to lay the groundwork with markets for potentially more frequent policy moves. These changes could generate uncertainty about the BoE's monetary response function, placing a greater premium on effective communication.

23. Expanding the set of policy tools could help strengthen the resilience of NBFIs and guard core financial markets against disruptions. The FSAP commended the authorities' swift policy actions at the pandemic outset to restore market liquidity and maintain financial stability. However, the experience also highlighted the underlying liquidity mismatches in many NBFIs and their lack of access to the BoE's liquidity facilities during stress episodes. Given the internationally connected feature of many NBFIs, improving their resilience to liquidity risks is a major cross-border challenge. The FSAP encouraged the authorities to work with relevant foreign authorities and speedily augment data collection and monitoring of NBFIs. Meanwhile, the BoE can strengthen its own backstops to the functioning of core markets in times of stress by considering allowing appropriately regulated, large, and interconnected NBFIs access to repo and/or gilt purchase

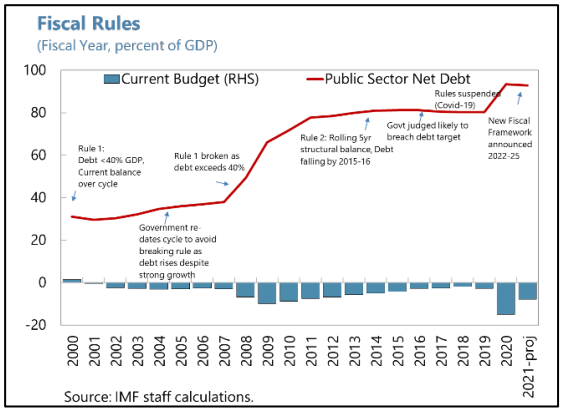
[13] See Borio, et al. (2021) "Second-round effects feature less prominently in inflation dynamics."
[14] Optimal monetary policy would respond more strongly to inflation when the sacrifice ratio is lower, when there is a larger adaptive component in inflation expectations, and when difficulties in measuring the output gap reduce its signal-to-noise ratio (Swanson, 2004; Gaspar, Smets, and Vestin, 2006).

operations. Better liquidity management in the UK vis-à-vis the large and global NBFI sector would also help reduce potential spillovers to the rest of the world.

24. ***Authorities' Views***. The authorities emphasized their strong frameworks, independent institutions, and proven ability to manage policy with discretion when needed. On fiscal policy, they did see a role to use the flexibilities in their fiscal framework to respond to potential future Covid related disruptions but stressed that previous programs reflected the exceptional circumstances of the pandemic. They underscored the concern that continuation of exceptional measures, or the expectation that these measures would be applied even in "normal" recessions, could have an adverse impact on the dynamism/flexibility of the economy, especially in the labor market. They also viewed this as important to generate public understanding of appropriate roles for exceptional measures. For monetary policy, they acknowledged risks and possible policy trade-offs and stressed the importance of ensuring that inflation expectations remain well anchored. On managing market volatility, the authorities stressed the international nature of NBFIs and the importance of their own self-insurance to shocks and of international cooperation on policy responses.

C. Anchoring Policies and Preserving Space through Strong Frameworks

25. The UK's strong policy frameworks, which have helped the country weather economic shocks well, will need to be maintained and selectively enhanced to help ensure macro and financial stability in the period ahead. The policy frameworks enabled the authorities to launch swift and comprehensive policy responses to combat the pandemic while keeping borrowing costs low, containing the public debt ratio, and preserving financial stability. However, with higher public debt and inflation going forward, fiscal and monetary anchoring will be essential. Meanwhile, the large financial system is undergoing several structural transitions, including a growing share of market-based finance, Libor cessation, green finance, greater exposure to cyber risk, and the rapid adoption of financial technologies. Adaptations to the policy framework will be important to ensure continued resilience and to minimize risks to public finances.



26. The authorities' new fiscal rules have anchored fiscal policy well, but in the medium term the framework would benefit from a supporting change. The UK has moved over time towards frequently changed fiscal rules, reflecting the choices of the government, and with deficit and debt ultimately evolving somewhat independently of targets (Table 10). Like in the past, the new fiscal rules include debt and current deficit targets, together with caps on investment and welfare. These new rules have a 3-year rolling nature and incorporate an escape clause, which provides flexibility to manage through volatility. The authorities also introduced important innovations, such as debt affordability and balance sheet considerations, consistent with past Fund advice (Table 3). Staff recognized that these frequent changes would be a plus for parliamentary accountability but

warned that this could also lead to excessive variation in the design of rules going forward, to the point that it could jeopardize the credibility of the constraint that the rules are designed to provide. Staff recommended that every time the design is altered, the parliament could benefit from a structured commentary on whether the new calibration aligns with higher-order fiscal objectives (such as sustainability or any other objectives defined in law). The OBR already prolifically produces materials that could illuminate how new rules meet defined objectives (text table), and staff recommended that this information be made available on a timelier basis to the parliament (e.g., annually), with the most relevant indicators always updated before the rules are considered and voted on by members of parliament.

OBR's Publications with Information on Fiscal Sustainability		
Report	**Frequency**	**Latest Report**
Economic and fiscal outlook	Every 6 mos.	https://obr.uk/efo/economic-and-fiscal-outlook-october-2021/
Fiscal sustainability report	Every 2 years	https://obr.uk/fsr/fiscal-sustainability-report-july-2020/
Fiscal risks report	Every 2 years	https://obr.uk/frr/fiscal-risks-report-july-2021/
Welfare trends report	Every 2 years	https://obr.uk/wtr/welfare-trends-report-march-2021/

27. The authorities have taken steps to strengthen the operation of the monetary framework close to the lower bound, but there are opportunities to address challenges related to tightening policy. The BoE has prepared the financial system for negative interest rates and has developed substantial experience with QE and Term Funding Schemes, making it better positioned to handle adverse shocks when close to or at the lower bound. Staff and the authorities discussed how to approach QT. Informed by the desirable features of a QT program and an assessment that the authorities' existing QT strategy had some gaps, staff recommended giving further guidance on managing the process back towards the steady-state balance sheet (Box 1). Staff argued that placing QT on a pre-programmed course would help ensure that the QT strategy is predictable and further cement the Bank Rate as the key monetary policy instrument. Still, the BoE should be alert to fluctuations in liquidity in core markets through the tightening phase and be ready to smooth liquidity issues with short-term Open Market Operations should significant pressures emerge. On the broader monetary framework, a calendar-based schedule of reviews of the framework, as recommended in last year's consultation, remains relevant.

28. The financial system has been resilient, with robust oversight and supervision, but there are opportunities for enhancements. The FSAP suggested specific approaches to ensure continued resilience of the system to address the structural transitions now underway (Table 11). Recent failures of two internationally active financial groups (Greensill and Archegos), although not systemic, illustrate the challenges facing global regulators in identifying NBFI vulnerabilities. In this context, addressing data and information gaps to facilitate analyzing potential risks from NBFIs and expanding surveillance of activities beyond the regulatory perimeter to monitor and supervise cross-border financial firms, along with other jurisdictions, will be critical. In areas of emerging challenges, like green finance, cyber threats, and financial innovations, a proactive approach should continue.

Concerning tackling illicit finance, there is a need to enhance risk-based AML/CFT supervision and improve the accuracy of public beneficial ownership registry through verification.

29. *Authorities' Views*

- **Fiscal policy**: The authorities emphasized that their new rules strike the right balance between flexibility and constraints. They made clear the need to rebuild fiscal space ahead of potential future shocks and have committed to get debt falling over the medium term, and explained how the 3-year rolling window allows the government to adjust to changing economic circumstances and how the escape clause can address extreme downturns. They noted that the inclusion of balance sheet metrics in the fiscal framework would provide a fuller picture of the assets and liabilities on the balance sheet, but that these statistics are in the early stages of development. The authorities acknowledged the importance of transparency to an effective fiscal framework.

- **Monetary policy**. The BoE noted that it has a range of policy tools in place to operate in the face of adverse shocks, and in its recent communications had explained its preference to use the Bank Rate as its active instrument. It also noted the benefit of moving the policy rate to a level from which significant reductions can be made if needed before commencing QT. It agreed that QT should happen in a gradual and predictable manner over time.

- The authorities welcomed the FSAP's positive assessment on their **financial stability framework** and recommendations to further strengthen it and indicated their intent to assess and follow up on the recommendations.

D. Advancing the Structural Transformation of the Economy

30. While the authorities have made significant progress in articulating their "Build Back Better: Our Plan for Growth" agenda (per ¶8), policies may need to be further scaled up to meet objectives:

- Concerning **the leveling up agenda**, needs appear to exceed what has been budgeted for (Table 12). Transport infrastructure gaps are especially visible in cities. On average, only 40 percent of citizens can travel from their house to the city center within 30 minutes, compared to 70 percent in Europe. The £5.7 billion included in the budget will cover only part of the estimated £31 billion of additional investment identified by the National Infrastructure Commission needed to completely close the gap.[15] Regional disparities in productivity—a key source of inequality in the UK—are partly explained by regional skill mismatches (e.g., London and the South East concentrate 35 percent of the skill-adjusted size of the workforce while only accounting for 26 percent of the total population). With digital transformations looming, and the

[15] See https://www.centreforcities.org/reader/measuring-up-comparing-public-transport-uk-europe-cities/.

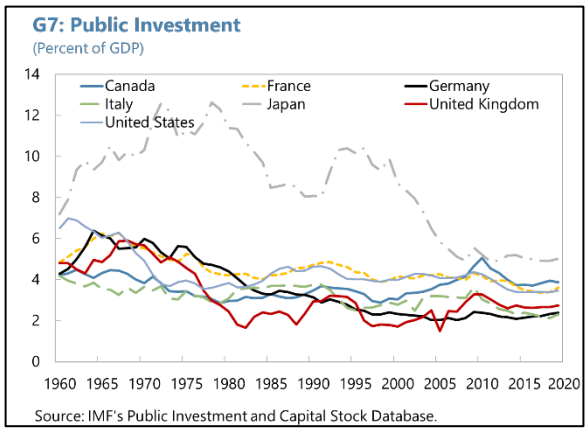
losses to human capital due to Covid (including due to missed schooling), this problem could be exacerbated without substantive efforts to invest in less developed regions and their residents.[16]

- **The Net Zero Strategy**, while ambitious, may need further policy support to deliver on the UK's legislated carbon reduction targets. Staff acknowledged the difficult political economy trade-offs the authorities faced and the lessons learned from articulating the strategy. However, staff emphasized gaps in some sectoral plans, potential shortfalls in public investment, and most importantly lingering questions about whether the combination of carbon pricing and regulatory measures proposed would stoke changes quickly enough in private behavior and investment (Box 2).

- Finally, the scale of potential **post-Brexit trade negotiations and legislative reforms** remains daunting. Over 70 existing EU trade agreements were rolled over, bringing important policy stability to the UK and its partners, but only two new FTAs have been signed to date. In the financial sector, onshoring of EU legislation was completed, and the authorities have to date started the process on several major financial sector reforms (covering the wholesale market, overseas framework, investment fund framework, CCP resolution framework, and future regulatory framework). More legislative reforms are likely coming as the authorities fit legislation to UK conditions.

31. To facilitate a more ambitious leveling up agenda, barriers would have to be overcome:

- **Further ramping up public investment would require overcoming concerns about preserving value-for-money and deliverability of projects**. Staff recognizes that the UK has one of the strongest public investment management frameworks worldwide but improving it would help facilitate catch up from years of low investment (the ratio to GDP in the UK has been among the lowest in the G7 group) and could motivate a less restrictive budgetary investment cap going forward. An ongoing dialogue between the UK and IMF is assessing public investment management, covering both standard and green investment projects. The preliminary assessment recommends extending planning horizons, improving the coordination between national and sub-national governments, revising project appraisal methodologies to better reflect the costs and benefits of climate change, and publishing the cost-benefit analysis and ex-post evaluations



[16] ONS (2018), Human Capital Estimates, UK: 2004–17, October. See: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/humancapitalestimates/2004to2017.

of large investment projects.[17]

- **Staff welcomed the authorities' efforts to improve training programs, noting that experience should guide next steps** (Table 13). Newly-introduced programs to facilitate labor relocation (e.g., the Sector-Based Work Academy Program and Skills Bootcamps) and prevent long-term unemployment among younger and older workers (e.g., the Kickstart and Restart programs) look well-targeted to sources of labor scarring (see Annex I) and still cyclically relevant given a projected 2023–24 slowdown in the economy. However, some review will be needed about their relative success and value-for money of all new programs before concentrating further resources on the most successful of them. Staff noted that if review ultimately shows that programs are not delivering the desired outcomes alternative approaches on ALMP design and delivery by Job Centers with enhanced engagement with stakeholders and more flexibility could be considered, drawing on models applied in other countries.[18]

- **Support for small businesses must continue to account for pandemic legacies**. While the authorities' programs on equity or equity-like support are comprehensive, they primarily focus on innovative firms or startups and are conservative on allocated resources (Table 14). SME liquidity and equity gaps in deeply-affected industries may grow as pandemic-era business support measures fully sunset in 2022 (indeed, insolvencies started to climb back from pandemic-era troughs in late 2021), and to the extent risks to the outlook materialize. Addressing gaps for viable firms would help mitigate sources of capital and TFP scarring in the medium-term (see Annex I). Staff sees scope to keep or expand some recent programs, such as reopening the Future Fund with a larger envelope. If tax and Bounce Back Loan repayments options are exhausted, similar options could be restored as needed (although attaching some viability assessment via the involvement of private lenders/investors).

- **As to overcoming budget barriers, there would be some scope to use budget reallocation to fund a more ambitious leveling up approach, but realistically the government would need to raise more revenues**. Staff argued that the focus should be on taxes targeting high income earners and the wealthy (text table). Staff noted that a revenue-based strategy would have a side-benefit of keeping policy within the newly-applicable fiscal rules. Staff also noted that additional revenues could finance additional "Build Back Better: Our Plan for Growth" priorities, as effective programs were designed (e.g., in the education area).

[17] Some of these recommendations can be also found in the report by the Resolution Foundation entitled "Euston we have a problem: Is Britain ready for an infrastructure revolution?" (https://www.resolutionfoundation.org/app/uploads/2020/03/Euston-we-have-a-problem.pdf).
[18] See OECD (2021), "Scaling up policies that connect people with jobs in the recovery from COVID-19." (https://www.oecd.org/coronavirus/policy-responses/scaling-up-policies-that-connect-people-with-jobs-in-the-recovery-from-covid-19-a91d2087/.

Options to Enhance the "Build Back Better: Our Plan for Growth" Effort		
Measures	**Fiscal Yield**	**Explanation**
Tax Policy Options to Generate Resources		
Increase PIT for the two upper income quintiles (per Institute for Fiscal Studies recommendation).	0.2 percent of GDP	A 2 percent rise to the basic rate of the personal income tax would yield 0.2 percent of GDP, and a 1 percent rise in the higher rate, 0.05 percent. For distributional purposes, staff recommends applying the tax increase to the group of the two upper quintiles.
Make VAT/Labor tax adjustments (per Institute for Fiscal Studies recommendation).	0.2 percent of GDP	Reducing National Insurance Contributions while broadening the VAT tax base to the level of the OECD average, could as a package generate some new revenues, incentivize hiring and cool down private consumption (thus alleviating ongoing demand-supply mismatches).
Introduce a tax on property (per Wealth Tax Commission recommendations).	0.7 percent of GDP	A one-off wealth tax payable on all individual wealth (after mortgages and other debts) above £2bn and charged at 1 percent a year for five years would raise a total of £80bn (or nearly 2 percent of GDP a year).
Modify dividends' taxation (per Tax Foundation recommendations).	0.1 percent of GDP	Basic-rate taxpayers would pay no tax on dividends; higher-rate taxpayers would face a 26 percent rate.

32. On the Net Zero Strategy, staff discussed with the authorities the possibility for more ambitious implementation. The key to this would lie in setting clearer and earlier incentives for private sector actions, introducing earlier compensation mechanisms in parallel, and taking earlier steps to remove barriers to greater private supply and higher green public investment. Specifically, staff recommended the following measures: (i) a move towards a comprehensive, predictable, uniform, and higher carbon price (to encourage adaptation);[19] (ii) more grants for low-income households living in homes that require significant investments and tailoring a section of ALMP programs to retrain workers from fossil-fuel industries; (iii) greater legal clarity about phase-in and other more direct measures to relieve supply bottlenecks (like facilitating visas for skilled foreign workers); and (iv) strengthening public investment management (including through continuing to build capacity for climate analysis across government, increasing transparency, and intensifying coordination across devolved and local governments (per the recently concluded Green-PIMA)). Importantly, all these could be done while being neutral in budgetary terms (e.g., a UK carbon tax on gas and electricity could raise enough revenues to pay for all the above-mentioned initiatives).[20]

33. For the Global Britain agenda, the discussions focused on the most pressing near-term issues.

[19] See Arregui, N., and I. Parry, "Reconsidering Climate Change Mitigation Policy in the UK," IMF Working Paper 20/268, December 2020.

[20] According to The Grantham Research Institute on Climate Change and the Environment at the London School of Economics, a UK carbon tax on domestic gas and electricity would generate revenue projected to be £57 billion over the period 2021–30. See: https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/03/Distributional-impacts-of-a-UK-carbon-tax_Report-1_analysis-by-household-type.pdf.

- For **trade with the EU**, the most pressing issue is to amicably resolve the dispute with the EU over the Northern Ireland Protocol. This would help limit uncertainty in the UK-EU relationship, which may be affecting private investment in the UK.[21] At the same time, measures to support smooth implementation of the TCA remain key, as disruptions in an already inflationary context would be highly unwelcome. Staff encouraged enhanced support to SMEs to comply with the border regulation, including document preparation and adaption to the new ports IT system. More broadly, staff supported the authorities' aim to promote an open, transparent trade policy at home and work effectively with partners to build a stronger, rules-based trading system anchored in the WTO.

- Regarding redesigning the UK's broader **regulatory framework**, a centerpiece of the near-term political debate is whether UK financial sector regulators should explicitly consider international competitiveness in their prudential decision-making (see the FSSA Section VI). The experience before the GFC showed that regulators could encounter a conflict between financial stability objectives and competitiveness considerations. Therefore, it will be important to preserve the primacy of financial stability, prudential safety and soundness objectives while maintaining strong governance, operational independence, and sufficient resources for regulatory and supervisory agencies. Staff will continue discussing regulatory reforms more broadly in future consultations as they develop further.[22]

34. ***Authorities' Views***. The authorities were satisfied with their progress with "Build Back Better: Our Plan for Growth," but cognizant of lingering challenges. Overall, they considered that the budgetary efforts announced in the Spending Review would be sufficient to meet their leveling up goals but were open to improvements within this envelope and more support if needed. They welcomed the dialogue with the Fund to improve public investment management. They agreed that the new ALMP programs should be evaluated frequently, and funding could subsequently be redirected to the most successful ones. They stressed that they were monitoring the financial conditions of SMEs. Concerning the Net Zero strategy, the authorities saw the pace and sequencing as delicately balanced politically and were of the view that the best strategy was to give the existing incentives time to take hold while pushing forward in areas where there are gaps and calibrating policies over the transition in response to economic and technological developments. On Global Britain, the authorities emphasized their desire to find a solution to Northern Ireland Protocol issues with the EU, their commitment to maintaining the highest international standards and practices for financial regulation and supervision, and their commitment to international cooperation.

[21] See the 2020 AIV Report for a discussion of the policy issues that would arise in the event, presently considered unlikely by staff, that negotiations break down and the relationship reverts from the TCA to WTO terms.

[22] One element of this is the authorities' continued efforts to address the supply and facilitation of corruption, summarized in Table 15.

STAFF APPRAISAL

35. It has been a challenging period for the UK, but with strong policy support the economy has proven to be resilient. Thanks to a rapid vaccination campaign, the country has been able to reopen and weather more recent waves of Covid with less of a health toll. With the economy re-opened, and backed by strong policy support, output and employment have returned to close to pre-pandemic levels. Financial stability has been maintained, and fiscal policy has been able to rotate towards more targeted support, with a consolidation plan now in place to stabilize public debt and deficits in the medium term. External stability has also been maintained, though the external position for 2021 is preliminarily assessed to be weaker than the level implied by medium-term fundamentals and desirable policies.

36. The outlook suggests that growth will remain strong in 2022, but so too will price pressures and risks. As the current Covid-Omicron wave passes, growth should rebound, while inflation should peak. In the medium term, supply bottlenecks should ease, allowing inflation to gradually return to target by 2024Q2, but real GDP would be held back by recent investment shortfalls and a less-than-full recovery of labor force participation. In the near term, there is a risk of higher inflation, but 2–3 years out the risk shifts to lower growth (as policy interventions are expected to pull demand back). New Covid-19 waves present a continuing risk, as do potential macro-financial feedbacks as interest rates rise. Tensions in Eastern Europe could exacerbate price pressures even while slowing the economy.

37. Monetary policy needs to withdraw the exceptional support provided during 2020–21 to help counter price pressures. Staff welcomes the recent increase in the policy rate, and notes that this provides an important signal to dampen rising inflation expectations while still leaving policy accommodative. The policy rate will need to be steadily brought to a neutral setting to bring inflation back to target by 2024Q2. The pace will need to balance the risk that overly rapid action could slow the recovery at a point when its sustainability is not assured and the risk that too slow a pace could allow second-round effects of inflation to proliferate (which would raise the cost of returning it to target). At present, the data suggest that the latter risk is of greater concern.

38. Fiscal policy should retain an important role in responding to large macroeconomic shocks. In the event the present outlook holds, fiscal policy can use the budget contingency to provide targeted support to the most vulnerable to help insulate them from sharp cost of living increases. More generally, fiscal policy can help address lingering demand-supply imbalances. The authorities could bring forward some fiscal tightening from FY23/24 to FY22/23 to help contain demand in the short run with the benefit of also reducing the drag on growth in outer years. In the event of a virulent Covid-19 wave requiring widespread mandated closures, the authorities should be ready to redeploy a subset of the most successful previous exceptional programs, but with due attention to lessons learned about their design (including targeting and timely sunset).

39. The financial cycle appears to be slightly ahead of the economic one, calling for continuing assiduous macroprudential and supervisory vigilance. The recent Financial Policy

Committee decision to gradually reestablish the countercyclical capital buffer is in line with the current risk environment and the data also support the proposed simplification of structural mortgage recommendations. Vigilance about housing market developments and broader systemic risk developments nonetheless remains in order, and the bank stress test design must continue to capture housing market correction risks and related systemic risk contagion channels.

40. The approach to macro policy can be adjusted to help manage risk and potential volatility into the medium term. The changes enacted through the Spending Review will have a side benefit of increasing automatic fiscal stabilizers, but there are opportunities to go further, by automatizing certain pandemic programs that were aimed at protecting marginalized labor market participants and small businesses. Meanwhile, in the face of extended shifts in relative wages and prices it would be important for the BoE to sharpen its reactions to inflation gaps, while carefully laying the groundwork with markets for policy moves. Finally, there is a need to strengthen liquidity risk resilience in NBFIs. While international efforts will be paramount, the UK authorities could consider allowing large, interconnected, and appropriately regulated NBFIs access to facilities to strengthen backstops to the functioning of core markets.

41. The UK's strong fiscal and monetary policy frameworks helped facilitate the well-executed pandemic response, but refinements could help address new challenges. The authorities' new fiscal rules are welcome but recent and potential variation in the design of rules makes it important to ensure that information is available on a timely basis to illuminate how new rules/calibrations meet higher-order fiscal objectives like sustainability. For the monetary framework, staff welcomes technical steps taken to facilitate the implementation of a negative policy rate, if needed. However, there is an opportunity to further cement the Bank Rate as the key monetary policy instrument by ensuring that the quantitative tightening strategy is made as predictable as possible and providing short term liquidity if the tightening process reveals liquidity mismatches.

42. The UK's financial system is in a resilient position, as noted in the FSSA, but there are opportunities to enhance the financial stability framework to address ongoing transitions. The FSAP points to addressing vulnerabilities, including continued enhancements to the perimeter of systemic risk monitoring and analysis to help illuminate emerging risks; accelerating efforts to address the data and information gaps (including at the international level) and to track exposures and risk management practices of complex cross-border financial firms; and pushing ahead with the existing approach to tackle climate and cyber threat related risks.

43. The authorities have put forward a comprehensive growth plan and should consider next steps. Staff welcomes the recent Spending Review which commits significant amounts of funding until 2025. However, there are opportunities to further advance the effort, and these could be financed even within the proposed fiscal rules, provided additional revenues are raised. With funding, public investment could be further scaled up, supported by improving an already-strong public investment management framework, and higher funding for active labor market policies could be allocated, targeted to the most successful of the recently introduced programs as experience is gained. Further opportunities to strengthen education and training could also be

pursued within an expanded resource envelope. Well-implemented, these policies would also help address inequality and strengthen supply-side resilience in the medium term.

44. The Net Zero Strategy is a major achievement, and opportunities to further strengthen it should be considered. The private sector will need to drive progress, which puts a premium on carbon pricing and regulation to secure the desired response. There are opportunities to be more ambitious, including by more rapidly extending the UK's ETS and legally clarifying the phase in of regulations. Greater ambition would need to be supported by more upfront compensation for vulnerable groups and tailoring some programs to retrain carbon economy workers.

45. The UK has made major strides in laying out its post-Brexit trade and financial sector frameworks, but much work lies ahead. In the trade area, there remain issues of contention between the UK and EU, and staff urges the two parties to find mutually beneficial outcomes. At the same time, as the UK concludes a review of its own post-Brexit financial regulatory framework, it will be important to preserve the primacy of financial stability objectives and safeguard the robust management of domestic and cross-border financial sector systemic risks.

46. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Box 1. Quantitative Tightening in the UK

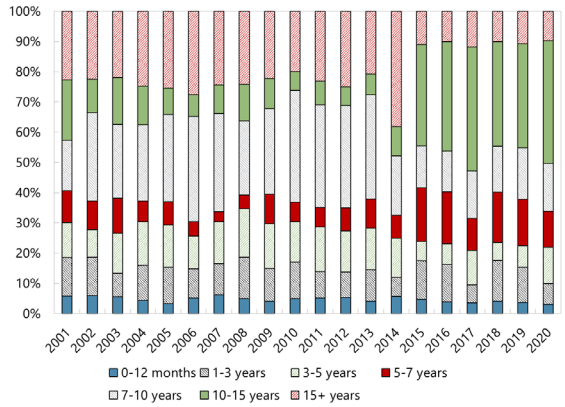
Well-communicated and predictable QT can bring several benefits:

- **Building space for monetary policy action (at the lower bound)**. A central bank can be constrained in executing QE, as there is a need to preserve the free float for each government bond issues to limit any distorting market effect (Ramsden, 2021). QT can help restore space relative to a minimum estimate of necessary free float.
- **Liquidity management**. As an economic recovery strengthens and uncertainty declines, the demand for reserves may fall. Movements can be large to the extent reserves have settled well above their medium-term trend and uncertainty abates quickly. Removing reserves on such a scale would be most efficiently accomplished through reducing the scale of the central bank's balance sheet (leaving more traditional instruments like repos to handle short-term variations in demand).
- **Strengthening financial stability**. Volatility and risk premia in government bond and other asset markets could arise due to sudden shifts in market expectations about the size of a central bank's balance sheet. Well telegraphed QT can help mitigate this concern.
- **Stronger communication of monetary policy**. It is advantageous to communicate the monetary policy stance via policy rate decisions (as policy rate changes are more potent and predictable in their effects, and easier to implement and communicate). However, direct and indirect impacts of QT need to be internalized to effectively do so.

For the UK, several of these considerations appear germane. Rebuilding space is not a key issue at the moment: staff estimates substantial room for further asset purchases at £174.5 billion as of end-FY21/22, and above £70 billion over FY22/23, figures which could rise due to a fiscal response to a shock. However, liquidity management looks set to become a concern: staff estimates that the monetary base needed to satiate reserve demand could settle in the 15–20 percent of nominal GDP and 1–5 percent of consolidated economy-wide financial assets range in the medium term (versus 45 percent of nominal GDP and 8 percent of financial assets estimated at end-2021).[1] Moreover, QT would likely improve gilt market functioning as there are indications that QE has reduced gilt turnover, especially at longer maturities (Figure 1 and 2). And volatility and risk premia in gilt and other asset prices would be a concern with sudden shifts in market expectations about BoE asset sales. Importantly, the BoE has expressed its desire to conduct policy through its Bank rate.

Figure 1. Gilt Market Turnover Ratio

Figure 2. Gilt Turnover Share by Maturity



Source: DMO

[1] These ranges are consistent with average levels over 2013–15 (which embed the impact of post-GFC financial sector reforms and decline in real rates on reserve demand).

Box 1. Quantitative Tightening in the UK (continued)

Against this backdrop, the BoE has outlined its QT strategy. It plans to cease reinvestment of maturing assets when the Bank Rate rises to 0.5 percent, and consider selling assets only after the Bank Rate rises to at least 1 percent. The Bank has also communicated its intention to conduct QT in a gradual and predictable manner to prevent disruption in financial markets, while maintaining the discretion to alter its plans in response to economic circumstances and market conditions. From a monetary policy perspective, the Bank does not envision using its decisions about QT to provide forward guidance about the future path of the Bank Rate, while the sequencing of rate hikes prior to QT aims to create space for rate cuts in case a negative shock materializes, rather than having to respond with new QE.

The BoE's strategy is generally well set up to address liquidity management and financial stability considerations but faces a challenge in bringing clarity to monetary policy:

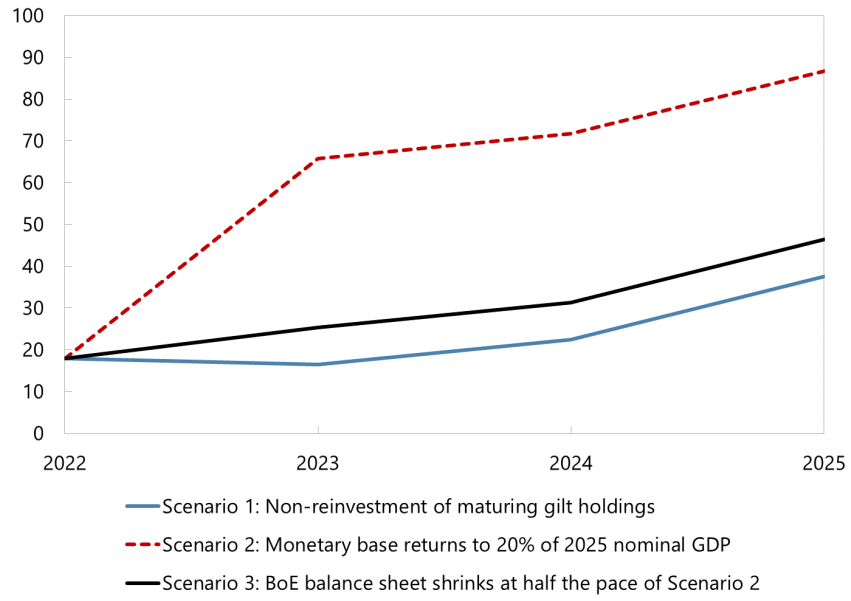
Liquidity management	• The large amount of discretion built into BoE's approach and the already-significant QE headroom would aid BoE in countering any shocks to reserve demand and unexpected impacts from QT.
Financial stability	• In the near-term, the strategy provides markets with clarity about the evolution of BoE's balance sheet. By giving substantial advance notice to markets to internalize and prepare for forthcoming QT, this limits volatility and risk premia in gilt and other asset prices associated with shifts in market expectations about QT. • However, in the medium-term the wide-open discretion could fail to guide markets about a shifting BoE footprint and create some uncertainty.
Monetary policy stance and communication	• Normalization of the monetary policy toolkit. The BoE's preference to rely on the Bank Rate as its active policy tool, and not to use QT to provide forward guidance about future short-term rates will simplify the monetary toolkit, and help clarify communications going forward. • Ability to tighten the monetary stance more rapidly. By not committing to further QE tapering or a reinvestment period prior to a liftoff in the Bank Rate, BoE has retained flexibility to tighten its monetary stance more rapidly, which appears valuable at present given the positive output gap, above-target inflation, and risks that expectations could become de-anchored. • However, communication disadvantages arise from: (i) tying QT to Bank Rate thresholds; and (ii) leaving QT undefined beyond the 1 percent Bank rate threshold. Markets may perceive the announced thresholds as triggers, making them focal points for market expectations on QT. This complicates both the BoE's overall communications and its effort to focus on the Bank Rate as its core instrument for policy, and risks muddling the signaling effects of rate decisions which cross these thresholds.

The following refinements could help bring greater clarity to the strategy, while cementing the role of the Bank Rate as the core monetary instrument:

- **Announcing a medium-term objective for QT** based on considerations about needed system-wide reserves and informed by consultations with market participants. Specifically, the MPC could decide on and announce a balance sheet size target range, and a speed at which to approach this. If new information comes to light suggesting that the optimal balance sheet size to target has changed, then the MPC could announce a revised strategy.
- **Delegating decisions relating to the day-to-day implementation of QE/QT to the Bank executive, while keeping the MPC in charge of setting the strategy**. This would help avoid giving the impression that QE/QT implementation provides a signal about the desired monetary stance or future policy actions (with the exception of when the Bank Rate is constrained by the ELB).
- **Re-affirming that the BoE takes into account the impact of QT on the monetary policy stance and transmission when setting the level of the Bank rate**. Embarking on QT would lead to a tighter effective monetary stance by influencing broader financial conditions (Figure 3).

Box 1. Quantitative Tightening in the UK (concluded)

Figure 3: QT impact on the shadow rate



Note: The QT profile embedded in scenarios 1–3 is calculated according to the maturity profile of the BoE's APF gilt portfolio, and under the assumption that reinvestment of maturing assets ceases in February 2022. Scenarios 2 and 3 also assume that active gilt sales start at end-2022. Scenario 2 includes active gilt sales of about £300bn over 2023–25, consistent with reducing the monetary base to 20 percent of projected nominal GDP in 2025. Scenario 3 assumes that the BoE balance sheet shrinks at half the pace of scenario 2, with about £50bn in active gilt sales over 2023–25 consistent with reducing the monetary base to 28 percent of projected nominal GDP in 2025. While £100bn in QT is assumed to raise the shadow rate by 50bps, there is considerable uncertainty around this figure which is based on estimates for QE. The time profile is generated by assuming that QT's impact on the shadow rate is flow-based, non-cumulative and materializes within the same year. However, the time profile could be more frontloaded due to announcement effects or more backloaded due to transmission lags.

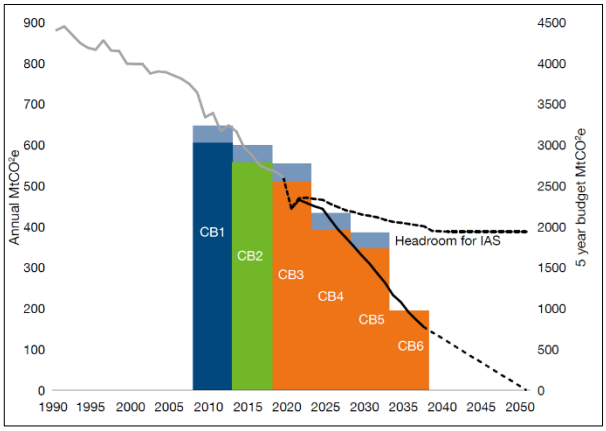
Sources: Bank of England and IMF staff calculations

Box 2. The UK's Net Zero Strategy

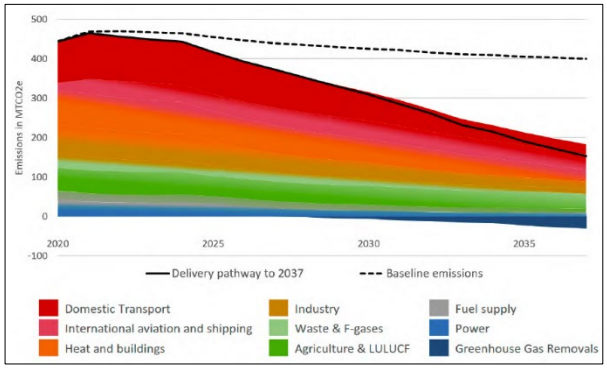
The UK's Net Zero Strategy is a comprehensive plan to reach carbon neutrality by 2050. It was published in conjunction with new sectoral plans and includes a monitoring framework at the cabinet level (the Climate Action Strategy Committee led by the PM and the Climate Action Implementation Committee led by sectoral ministries). The Climate Change Committee (CCC), an independent body, is set to lead the monitoring framework, and will publish annual reports.

The Strategy is anchored by budgets for carbon emissions. The Strategy sets a pathway to meet the UK's Nationally Determined Contribution for 2030 and a goal of reducing emissions from 1990 to 2035 by 78 percent. While the 7th and 8th carbon budgets are still pending, the trend of emissions reductions is so far consistent with reaching net-zero by 2050, and the targets have a strong legal status enshrined by the 2008 Climate Change Act.

The Net Zero Strategy:



- **Prioritizes known technologies and solutions**. Electrification forms the backbone of the transition, with new petrol and diesel cars and vans phased out by the early 2030s and a major scale-up in heat pumps. The power sector grows to support electrification and is fully decarbonized by 2035. Hydrogen supplements the effort where the potential for electrification is more limited. Greenhouse gas removal plays an important role, with major programs of tree planting and peatland restoration.



- **Sets out how the government expects each sector to contribute to the reduction path**. Ranges around a central delivery path reflect multiple possible scenarios for meeting the Net Zero target by 2050, depending on how decarbonization options develop. All sectors contribute under all scenarios, including agriculture, aviation, industry, and shipping, which have been perceived as inherently difficult to decarbonize.
- **Primarily relies on private sector investment, seeded by public investment**. The Strategy anticipates additional annual green investment rising to £50–60 billion by 2030, a third of which would be public (according to estimates by the OBR). By targeting measures at an industry level, rather than at the individual consumer, the Net Zero strategy hopes to help grow a stronger market for low carbon goods and give businesses clear and early signals to invest. For example, the 2030 phase-out date for petrol and diesel cars and vans aims at sending a signal to producers so that they invest to put zero emission vehicles on the market. Similarly, the package of

Box 2. The UK's Net Zero Strategy (concluded)

regulations included in the Heat and Buildings Strategy aims to bolster the low carbon heating market, creating new investment opportunities for businesses.

- **Considers how to compensate those most affected during the transition**. The strategy commits additional funding for new training programs (e.g., Skills Bootcamps) that could help individuals get the necessary training to work in the green economy (440,000 well-paid jobs are projected to be created in new green industries by 2030). Also, grants of £5,000 will be available to lower income households to replace their gas boiler with a low carbon heat pump as part of efforts to cut emissions from homes.

However, there appear to be a number of gaps that could frustrate the achievement of targets (Table). These include an open question about whether incentives, including regulation and carbon pricing, will be enough to encourage a fast enough private sector behavioral response, potential shortfalls in compensation mechanisms for those adversely affected by the transition, and potential shortfalls in needed public investment (including due to gaps in the framework for managing green public investment).

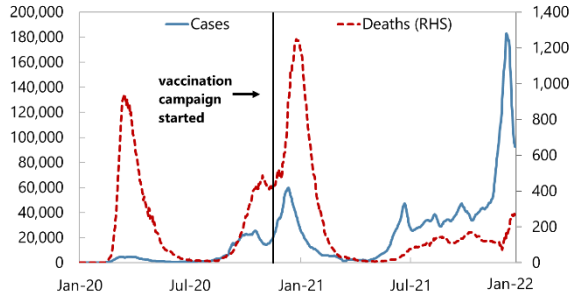
Climate Policy	Issues
Private Sector Role	• Regulations remain unspecified in a number of areas (e.g., there is not clear legislation underpinning the promised phasing out of coal power by 2024). • New climate regulation and clear incentives are needed to incentivize the behavior of private agents and induce green private investment (which according to the Net Zero Strategy should be the main source of the £90bn necessary to reach the climate goals).
Carbon Pricing	• The current layering of carbon pricing tools (climate change levy, carbon price support, fuel excises, etc.) leads to a variation in carbon prices across sectors. • UK's Emissions Trading System currently applies to energy intensive industries, the power generation sector and aviation, and needs to be extended to more sectors to get to net zero. • End users have expressed concern about the lack of liquidity in ETS UK. • ETS UK rules require the government to consider intervening if carbon permits consistently trade at more than 2.5 times their 2-year average price, which makes the price subject to market speculation.
Compensation Mechanisms	• Net zero requires upgrading insulation and installing low-carbon heating systems in 17 million homes which have an energy performance certificate below band C. • The Department for Business, Energy and Industrial Strategy estimates that retrofitting all houses to band C will require (preliminary estimates) between £35bn and £65bn by 2035. • The Net Zero strategy commitment to spend £500m in £5,000 grants over the next three years is insufficient, as it would only help 30,000 households a year (when the CCC estimates that at least 600,000 are necessary per year).
Green Public Investment	• The CCC estimates that the capital investment required to achieve net zero will go up from around £10bn/year (0.4 percent of GDP) in 2020 to £50bn/year in 2030 (remaining at this level until 2050). But no plans have been announced as to how much will be in the form of public investment. Authorities' mobilization of £26bn (about 1 percent of GDP) since 2020 is far from the CCC estimate. • A recent IMF Green PIMA mission pointed to weaknesses in PIM that may impede scaling up, including coordination with devolved administrations and local governments, the oversight and monitoring of public corporations, the PPP framework including climate risks, the appraisal and selection of climate-related projects, and in climate budget coding.

The authorities noted that their elaboration of a net-zero strategy had underscored the importance of retaining some degree of flexibility when doing such exercises. They singled out the importance of a credible and predictable legal framework, but with some flexibility embedded to allow the market to find the most affordable solutions. They also pointed to tracking the impact of policies on different demographic groups and different stakeholders as key, since they may respond differently to the same interventions, and the Strategy should be flexible enough to incorporate modifications in the mix of policies as lessons are learned.

Figure 1. United Kingdom: Covid Impact and Policy Response

The UK has been hit hard by repeated Covid waves...

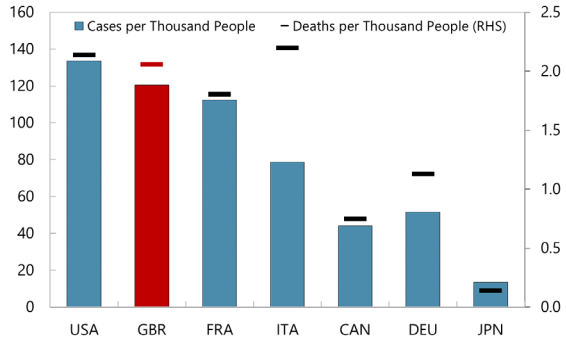
COVID-19 Confirmed New Cases and Deaths
(7-day moving average, daily cases and deaths)



Sources: Johns Hopkins University CSSE COVID-19 Data; Hannah Ritchie, Edouard Mathieu, Lucas Rodés-Guirao, Cameron Appel, Charlie Giattino, Esteban Ortiz-Ospina, Joe Hasell, Bobbie Macdonald, Diana Beltekian and Max Roser (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' [Online Resource].

...and overall, has had one of the highest infection and death rates among G7 countries.

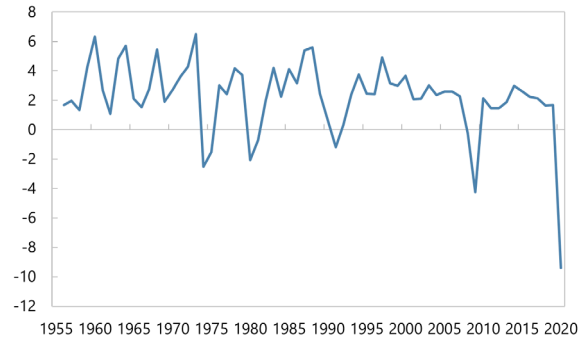
G7: Aggregate COVID-19 Cases and Deaths
(Number per Thousand People, 2020 Population)



Source: Bloomberg Finance LP.

The Covid pandemic led to a historically large drop in output.

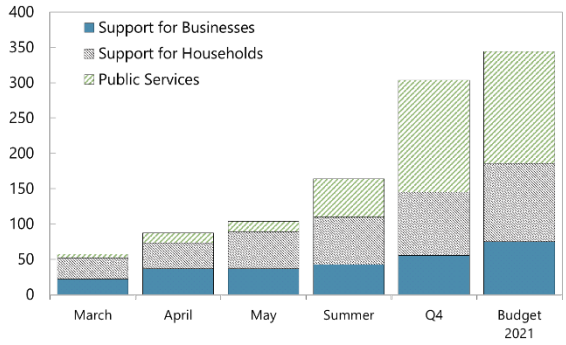
History of Real GDP Growth 1955-2020
(Percent)



Sources: ONS and Haver Analytics.

The government quickly ramped up support...

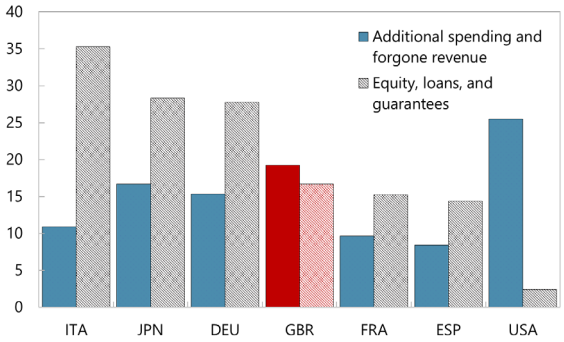
Evolving Costs of Coronavirus Policy Response
(Millions GBP)



Source: OBR Economic and Fiscal Outlook March 2021.

...using both above-the-line and below-the-line tools.

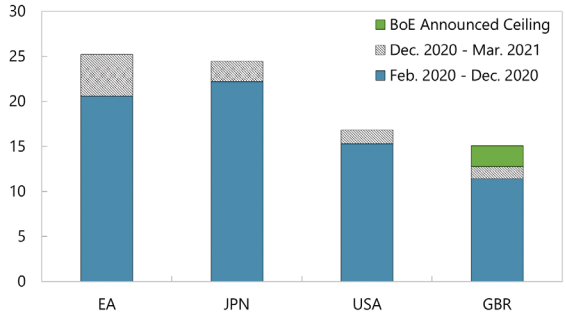
Fiscal Response to Covid-19
(Percent of GDP)



Source: IMF Fiscal Monitor Database.

The Bank of England also deployed unconventional monetary tools.

Balance Sheet Expansion by Central Banks
(As of March 2021, Percent of 2020 GDP)



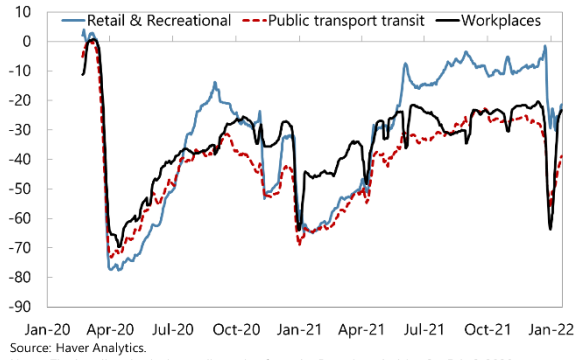
Sources: Central Banks, Haver Analytics, and IMF World Economic Outlook.
Note: Expansion is calculated as the difference between the value of central bank asset holdings. Green bar for GBR indicates expansion implied by announced ceiling as of 2021Q1.

Figure 2. United Kingdom: Real Sector Developments

The economy gradually reopened starting in the Spring, ...

Google Mobility Indicators

(7 Day Moving Average of Percent Deviation from Baseline)

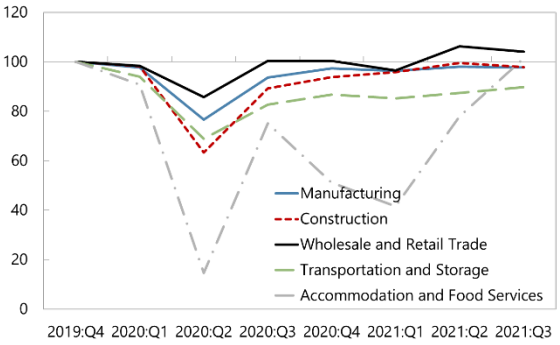


Source: Haver Analytics.
Notes: The baseline day is the median value from the 5-week period Jan 3 – Feb 6, 2020.

...and production has been recovering.

Gross Value Added By Sector

(2019Q4=100, SA, Mil.2019 GBP)

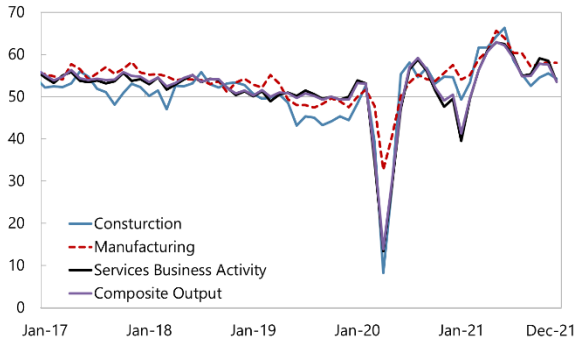


Sources: ONS and Haver Analytics.

PMIs initially surged and have since settled at still strong levels.

PMI by Sector

(SA, 50+=Expansion)

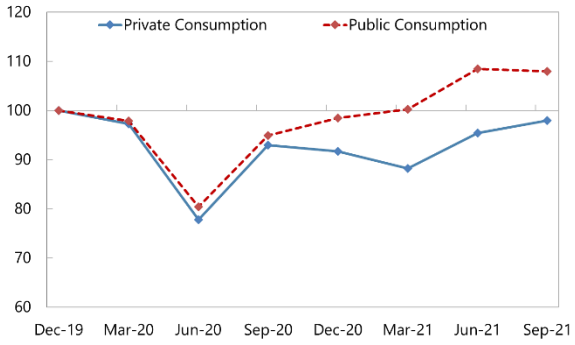


Sources: CPS/IHSM and Haver Analytics.

Consumption recovered sharply in mid-2021, ...

Real Consumption

(Index, 2019Q4=100)

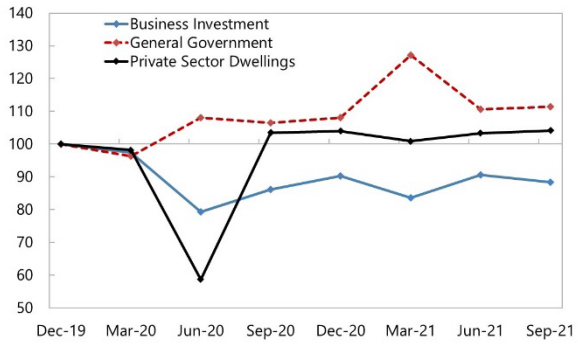


Source: Haver Analytics.

...as did investment.

Real Fixed Investment

(Index, 2019Q4=100)

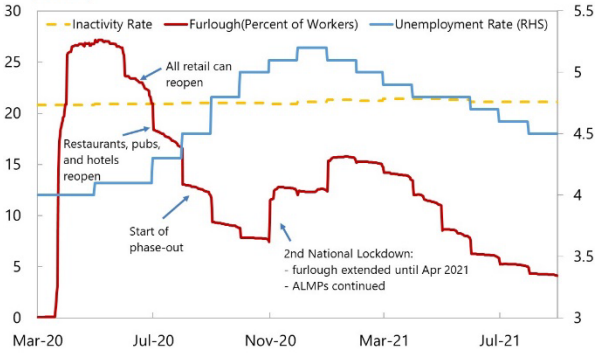


Source: Haver Analytics.

The unemployment rate stayed low despite the end of the furlough scheme.

Furlough,Unemployment, and Inactivity

(Percent)

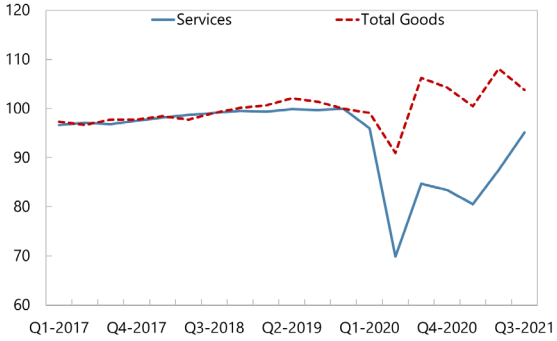


Sources: ONS, HM Revenue & Customs, and IMF staff calculations.

Figure 3. United Kingdom: Supply Constraints

Consumption has shifted from services to goods, ...

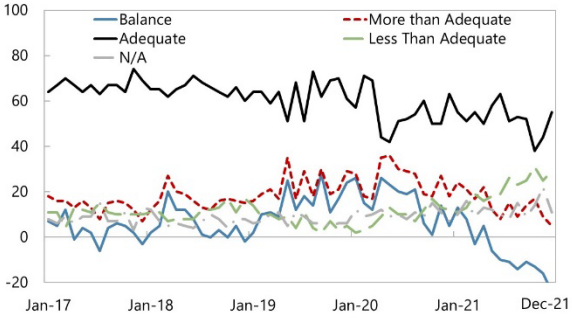
Evolution of Goods and Services Consumption
(Index, 2019Q4=100)



Sources: ONS and Haver Analytics.

...with supply constraints leading to historically low goods inventories.

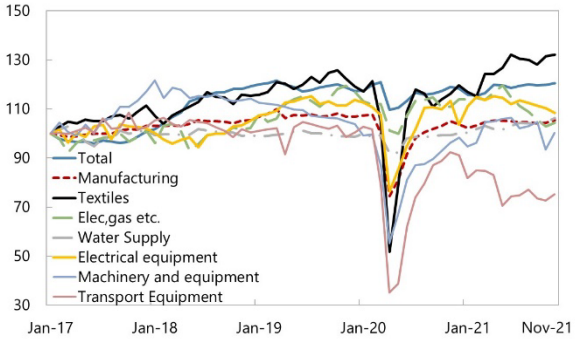
CBI Industrial Trends Survey: Stocks of Finished Goods
(Percent of businesses reporting on stock adequacy)



Note: Balance equals to % of businesses reporting "more than adequate" minus % of businesses reporting "less than adequate."
Sources: CBI and Haver Analytics.

International supply chain problems are showing up in the production of transportation equipment.

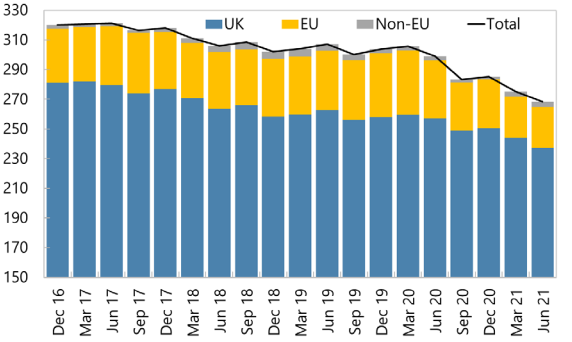
Industrial Production Index by Sector
(SA, Jan-2017=100)



Sources: ONS and Haver Analytics.

The UK also faces domestic logistics problems that pre-date the pandemic and that will take time to resolve.

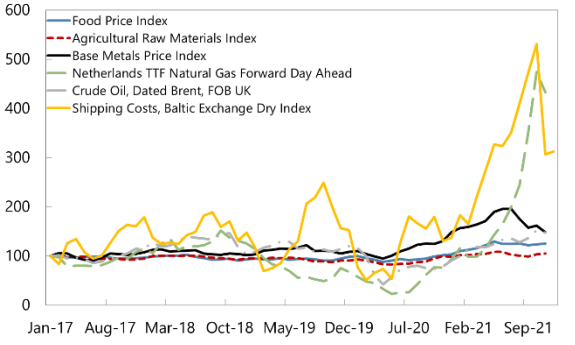
The Number of Heavy Goods Vehicle Drivers
(Thousands, Average of previous 12 months)



Source: ONS.

High shipping costs and gas prices signal supply shortfalls relative to demand.

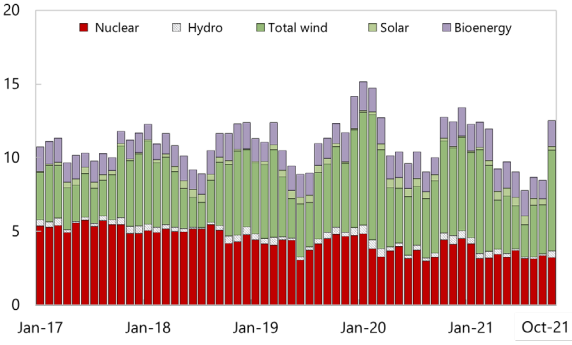
World Commodity Prices and Shipping Rates
(Index, Jan-17=100)



Sources: IMF Primary Commodity Prices System and Haver Analytics.

The UK has also experienced fluctuations in renewable energy production.

Electricity Supplied (Net) by Major Power Producers, by Fuel
(TWh)

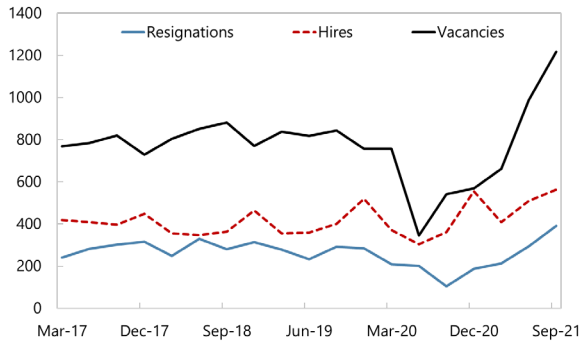


Source: Department for Business, Energy & Industrial Strategy.

Figure 4. United Kingdom: Labor Market Developments

Sharply higher job vacancies and quit rates…

Job Resignations, Hires, and Vacancies
(NSA, Thous.)



Sources: ONS and Haver Analytics.

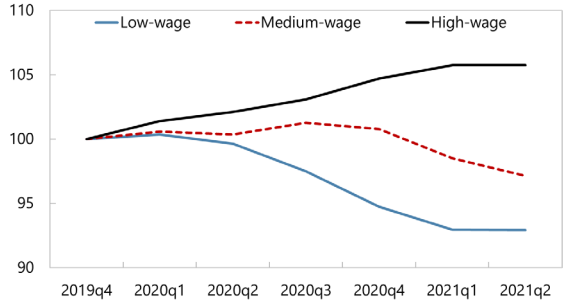
…led to a historically tight labor market.

Labor Market Tightness
(Percent)

Note: Labor market tightness is calculated by dividing total vacancies by total unemployment. Shaded areas denote past high inflation episodes where headline inflation peaked above 3.5 percent year on year.
Sources: Bank of England, ONS, Haver Analytics, and IMF staff calculations.

Employers have had a much easier time filling high-wage positions.

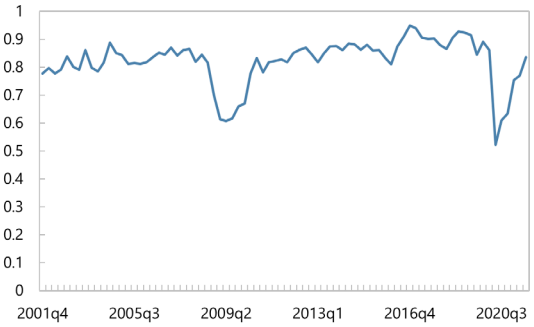
Employment by Occupations Ranked By Wages in 2019
(Index, 2019Q4=100)



Notes: Occupational classification into low, medium and high wage terciles was derived from LFS microdata. Employment data from ONS was then used to calculate the evolution of average employment levels across occupations within each wage tercile.
Sources: UK LFS, ONS, and IMF staff calculations.

…while sectoral/occupational mismatches have gradually declined.

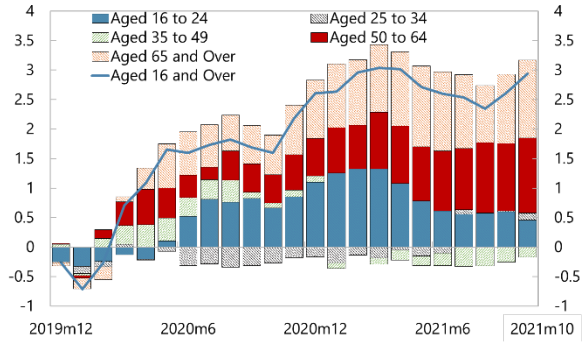
Correlation of Vacancy and Unemployment Shares



Note: The figure plots the correlation between vacancy and unemployment shares across 18 industries. Lower corelation values indicate a higher degree of mismatch.
Sources: ONS, UK LFS, and Pizzinelli and Shibata (2022).

Labor supply has been affected by declining participation by old-aged workers…

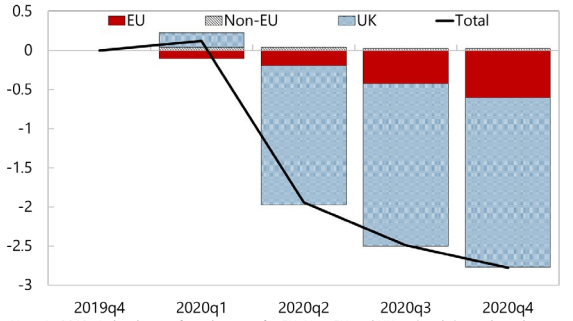
Economic Inactivity Decomposition by Age Group
(Percent change relative to 2019Q4 Average)



Sources: ONS and Haver Analytics.

…and lower employment of EU migrants.

Breakdown of Employment by Nationality
(Percent change from 2019Q4)

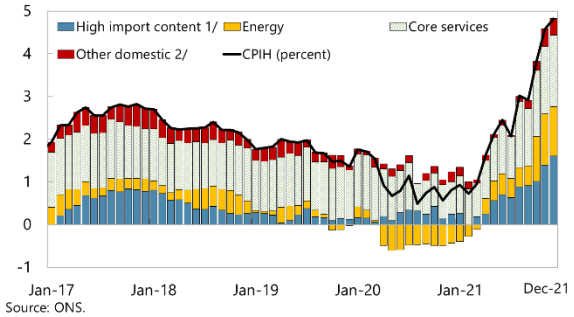


Note: In 2019q4, the shares of employment for EU, Non-EU and UK nationals in total employment were 8 percent, 7 percent and 85 percent respectively.
Source: HMRC Pay As You Earn Real Time Information.

Figure 5. United Kingdom: Price Pressures

Inflation has rebounded with broad-based contributions...

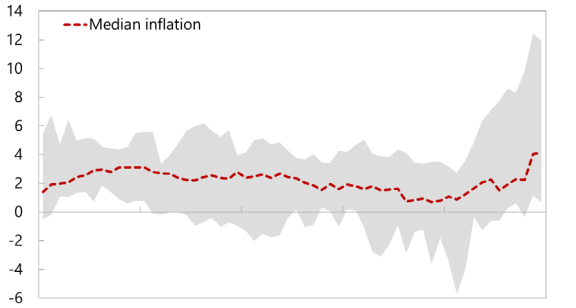
Contribution to CPIH Inflation
(Percentage point contribution to overall inflation)



Source: ONS.
1/ Derived from government securities, assuming RPI inflation exceeds CPI inflation by 1 percentage point.
2/ Labor cost (per worker) over productivity.

...and larger dispersion.

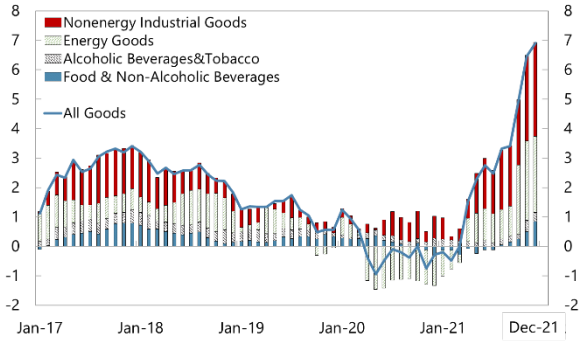
CPI Dispersion
(Y-o-y percent change, SA)



Sources: ONS and Haver Analytics.
Note: Shaded area is the CPI range for each month across industries.

Goods inflation was largely driven by energy and industrial goods, ...

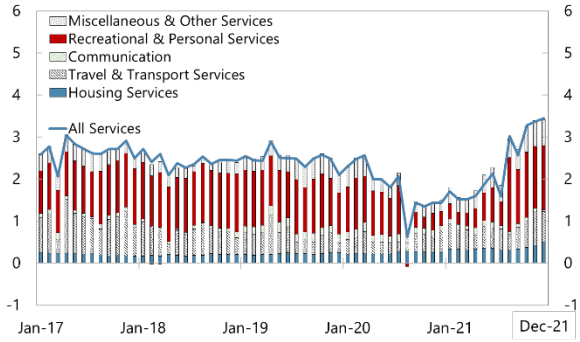
Goods Inflation
(Y-o-y percent change)



Sources: ONS and Haver Analytics.

...while services inflation was more widespread.

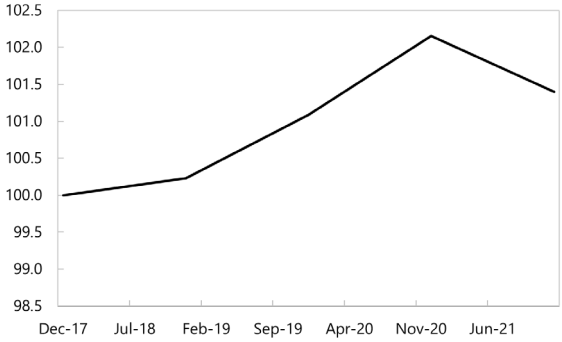
Services Inflation
(Y-o-y percent change)



Sources: ONS and Haver Analytics.

Rising prices of imports have been reflected in a deteriorated terms of trade.

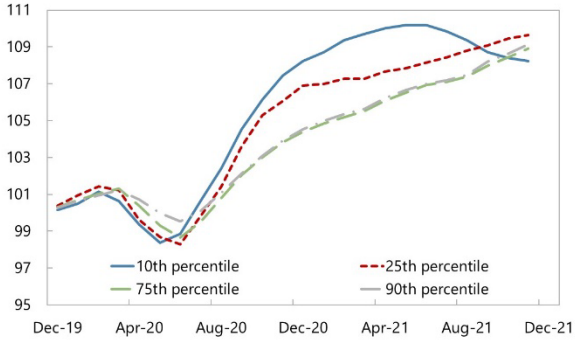
Terms of Trade
(Index, Dec-2017=100)



Sources: IMF Primary Commodity Prices System and Haver Analytics.

Wage pressures have also picked up.

Monthly Pay by Percentile
(2019Q4=100, SA, 3mma)

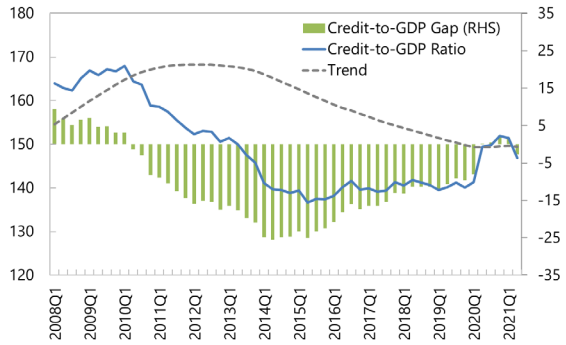


Source: HMRC Pay As You Earn Real Time Information.

Figure 6. United Kingdom: Credit Developments

The credit-to-GDP gap is close to zero, ...

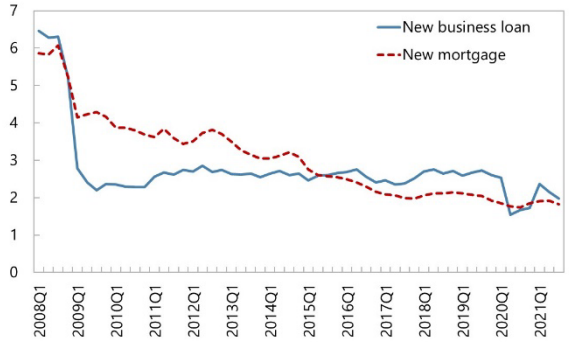
Private Credit Gap
(Percent, EOP)



Source: Bank of England.

...and lending rates remain low.

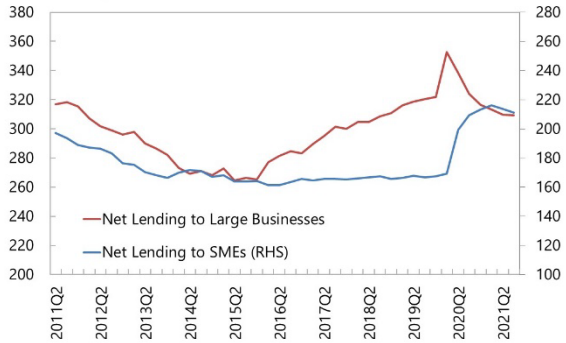
Bank Lending Rate
(Percent, weighted average)



Source: Bank of England.

Large corporates have repaid an initial surge of borrowing while SME borrowing remains at a higher level, ...

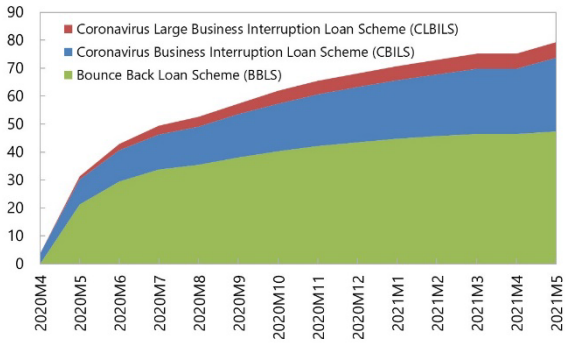
Bank Credit to SMEs and Large Companies
(Outstanding balance, EOP, NSA, £ billions)



Source: Bank of England.

...reflecting a large amount of public guaranteed loans to SMEs and...

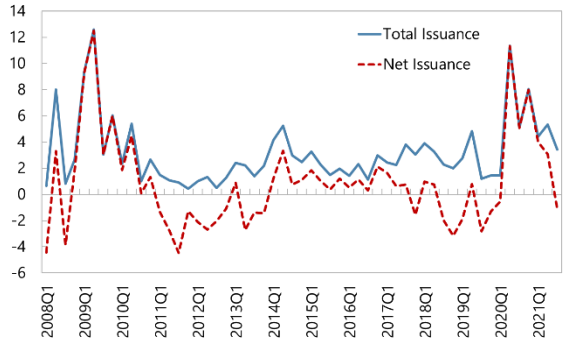
Public Guaranteed Loans
(Total approved, £ billions)



Source: HM Treasury.

...high capital issuance by large corporations.

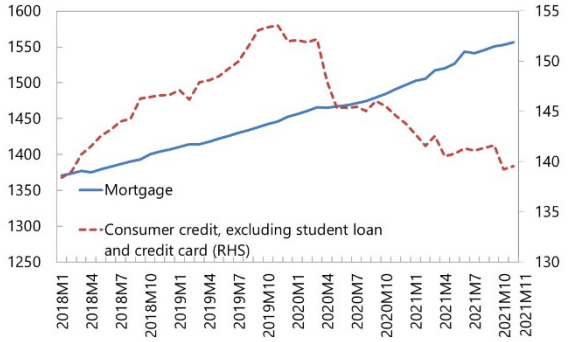
Capital Issuance by Non-Financial Corporates
(NSA, £ billions)



Source: Bank of England.

Mortgage lending continues to increase while consumer credit remains low.

Lending to Households
(EOP, £ billions)

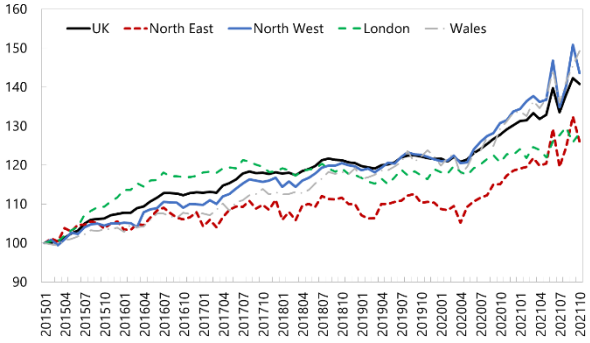


Sources: Bank of England.

Figure 7. United Kingdom: Residential Real Estate Developments

House prices have sharply increased outside of London and other city centers...

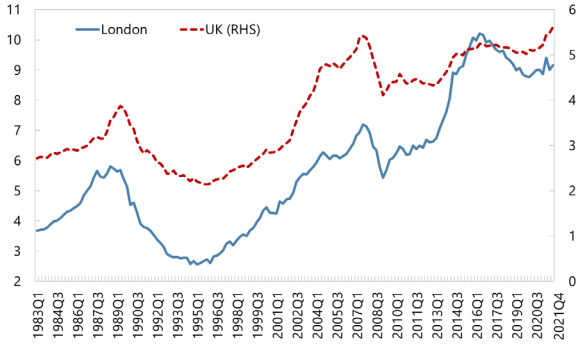
House Price Indices
(NSA, January 2015=100)



Source: HM Land Registry.

...contributing to a further deterioration of house price affordability.

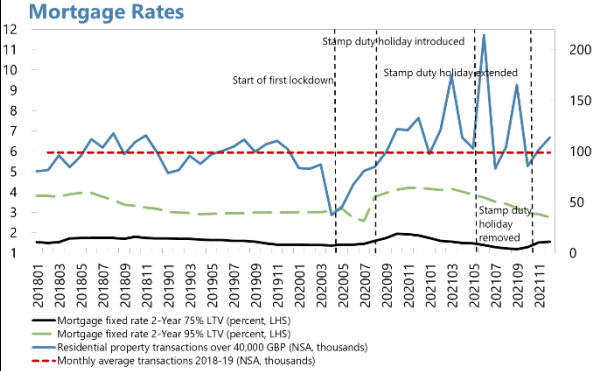
First-Time Home Buyer House Price-to-Earnings Ratios
(Percent)



Source: Nationwide.

Higher activity reflects several factors, including the stamp duty holiday and easy credit conditions...

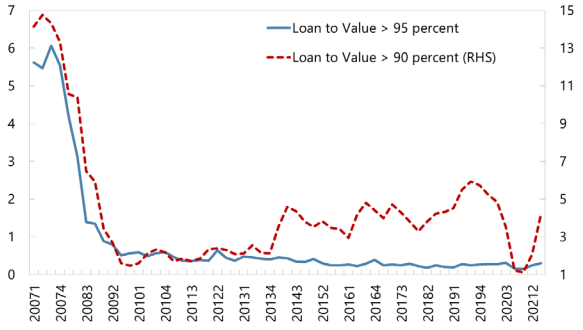
Monthly Residential Property Transactions and Mortgage Rates



Source: HM Revenue and Customs.

...but mortgage debt vulnerabilities seem so far contained as high-LTV loans remain relatively low...

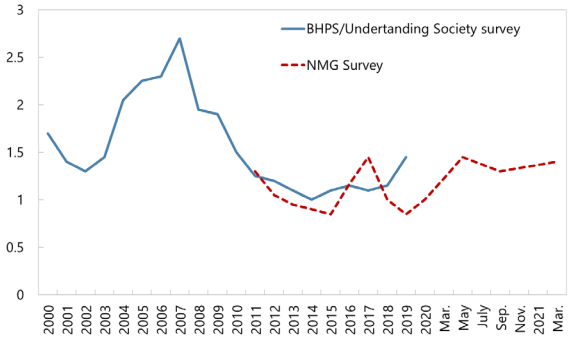
New Mortgage Loans
(Percent of Gross Advances, NSA)



Source: BoE Mortgage Lending and Administration Return (MLAR).

...and so does the proportion of households with high mortgage DSRs (>40%)...

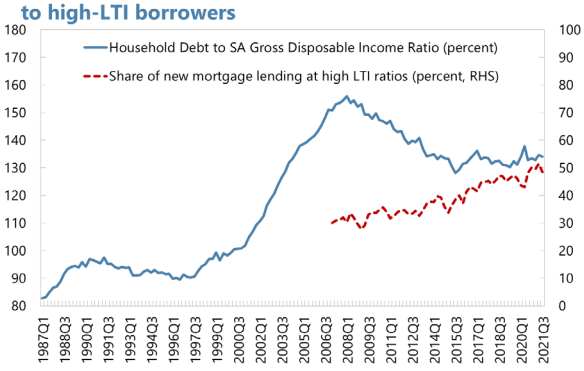
Proportion of Households with Mortgage DSRs at or above 40 Percent



Source: BoE Financial Stability Report.

...while household aggregate debt to income has been stable despite a rising share of new lending at high LTI ratios.

Aggregate debt-to-income ratio and new lending to high-LTI borrowers

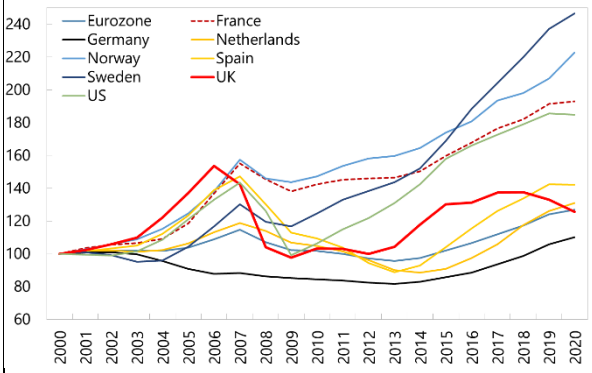


Sources: Haver Analytics and BoE Mortgage Lending and Administration Return (MLAR).

Figure 8. United Kingdom: Commercial Real Estate Developments

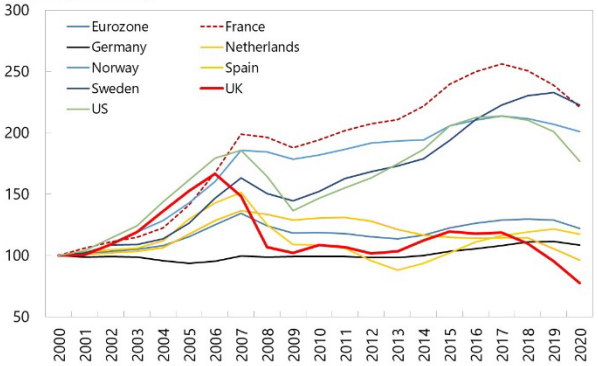
The aggregate UK CRE price remains low compared with major advanced economies and its pre-GFC peak, ...

CRE Real Valuations, All Segments
(Index, 2000=100)



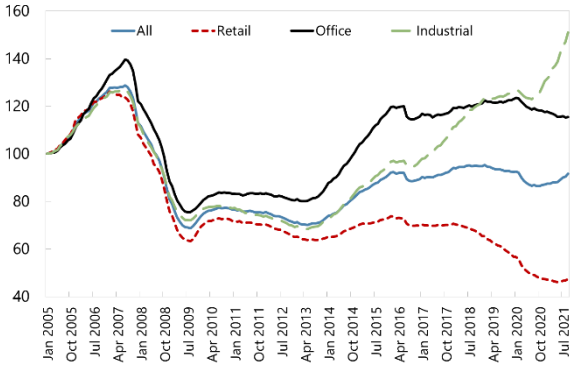
...reflecting depressed retail prices.

CRE Real Valuations, Retail
(Index, 2000=100)



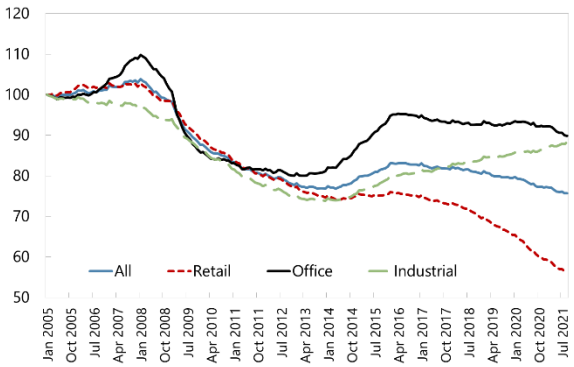
Retail prices stabilized somewhat in recent months, while industrial prices increased, ...

CRE Real Prices
(Index, January 2005=100)



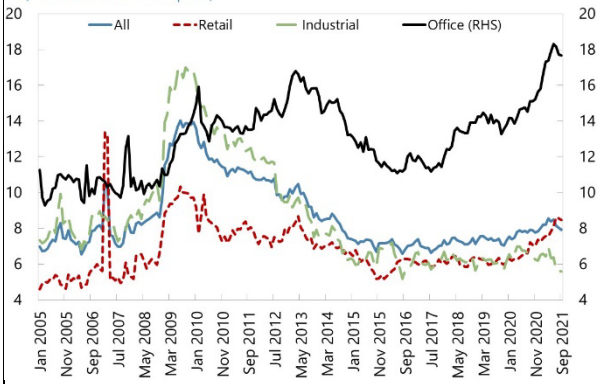
...although much more than rental values, possibly pointing to some overvaluation or more likely, to some delays in the adjustment of rents.

CRE Real Rental Values
(Index, January 2005=100)



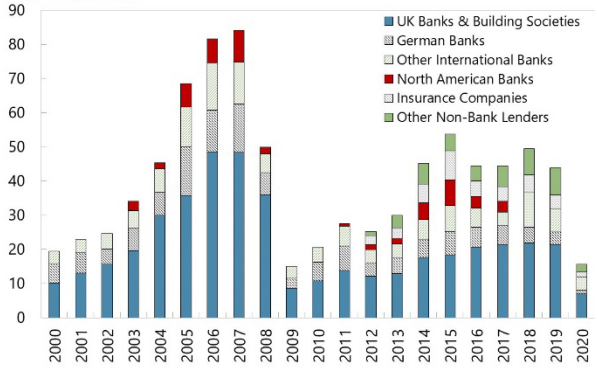
Industrial vacancy rates remain very low, suggesting a low probability of price correction.

CRE Vacancy Rates
(Percent of total floorspace)



UK banks' exposures to CRE are significantly lower now than in pre-GFC period, implying limited macrofinancial risks.

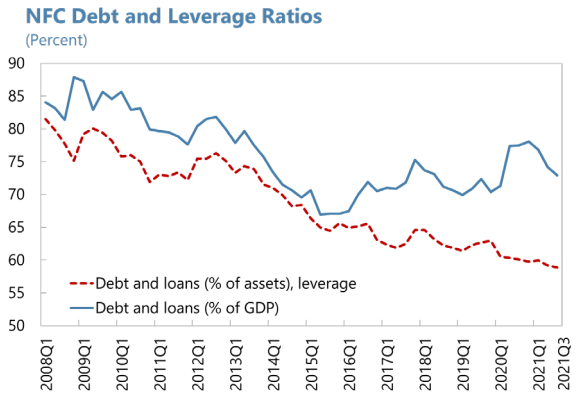
New Loans to UK CRE
(Billion pounds)



Note: 2020 data through H1 for the last chart.
Sources: MSCI Real Estate, Haver Analytics, The Business School, and IMF staff calculations.

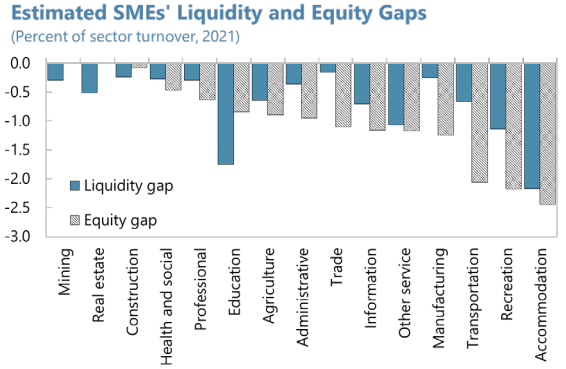
Figure 9. United Kingdom: Private Sector Balance Sheets

NFC balance sheets remain much stronger than during the GFC period, ...



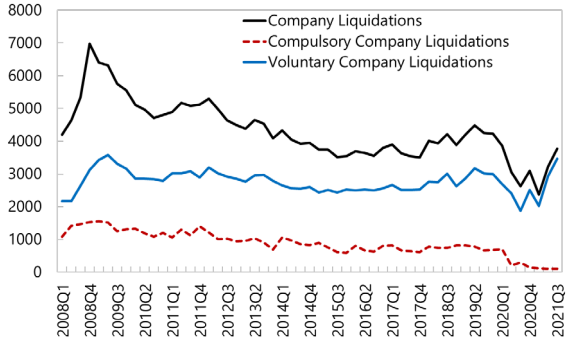
Sources: ONS and IMF staff calculations.

...while SME liquidity and equity gaps are mostly moderate.



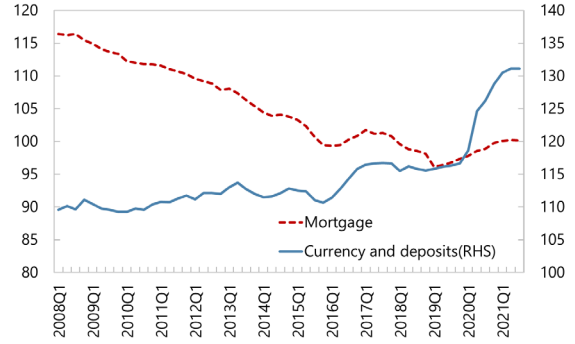
Sources: ORBIS, BOE, HMT, and IMF staff calculations.
Note: A liquidity gap refers to when a firm's liquid assets are insufficient to cover the cash-flow deficit. An equity gap refers to when a firm has negative equity.

Corporate insolvencies dropped sharply during the pandemic but have since started to rise.



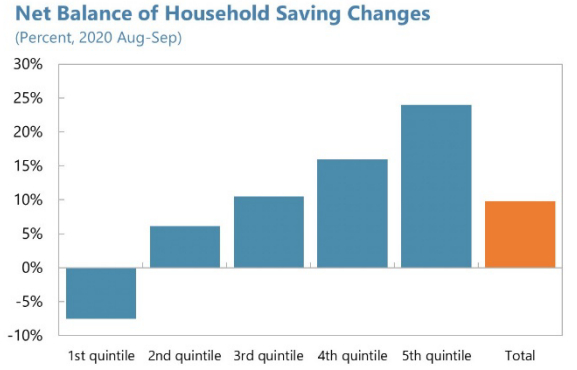
Source: The Insolvency Service.

Household balance sheets have been boosted by higher savings while household debt has been more contained.



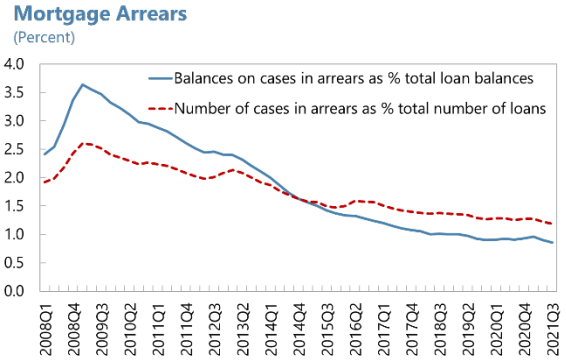
Sources: ONS and IMF staff calculations.

Household savings are concentrated in higher-income groups.



Sources: NMG Household Survey and IMF staff calculations.
Note: Net balance is the percentage of households reporting savings increases minus the percentage of households reporting decreases.

Overall mortgage arrears remain historically low.

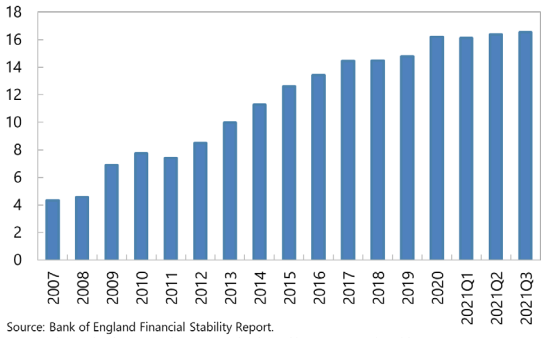


Source: Mortgage lending statistics (FCA).
Note: Arrears are defined as instances when any contractual payments, of capital, interest fees or other charges, are overdue at the reporting date.

Figure 10. United Kingdom: Financial System

Major banks' capital ratios further increased during the crisis...

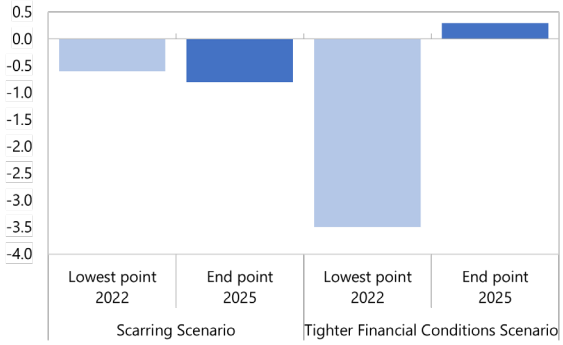
Aggregate CET1 Capital Ratio of Major UK Banks
(Percent)



Source: Bank of England Financial Stability Report.
Note: Major UK banks are Barclays, HSBC, Lloyds Banking Group, Nationwide, NatWest Group, Santander UK, Standard Chartered, and, from end-2020, Virgin Money UK.

...and could weather further adverse shocks.

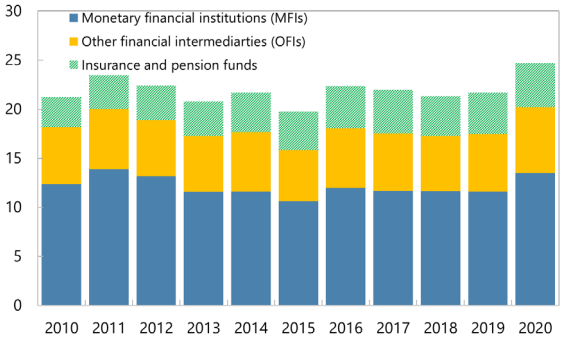
Banks CET1 Ratio under FSAP Stress Scenarios
(Difference from baseline; in percentage points)



Source: FSAP Analysis.

NBFIs are an equally important sector, ...

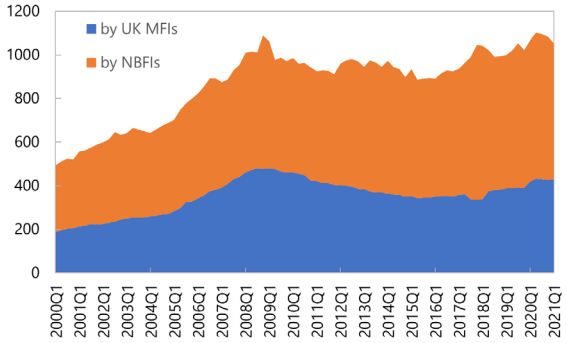
UK Financial Sector - Financial Assets
(Trillion £)



Source: ONS.

with sizable shares in corporate lending...

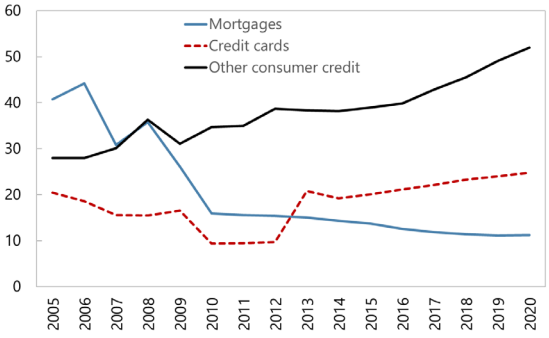
Loans to UK NFCs
(in billion £)



Sources: ONS, BOE, and BIS.

...and in consumer credit.

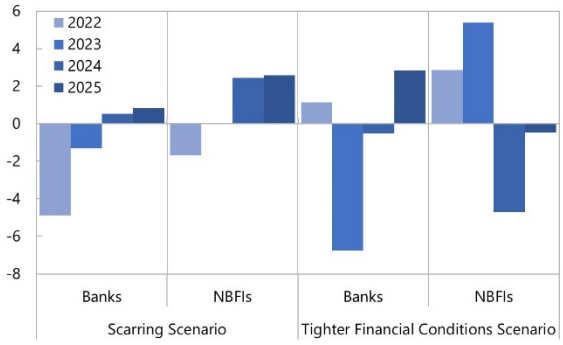
NBFI share in outstanding household credit
(in percent)



Sources: ONS and BOE.

NBFIs' lending seems less procyclical than banks' lending under the FSAP stress scenarios.

Real Credit Growth under FSAP Stress Scenarios
(Difference from baseline; in percentage points)

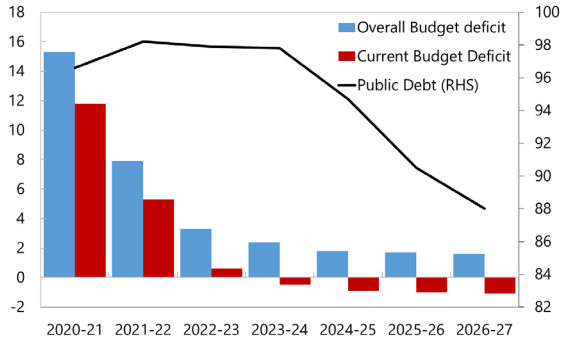


Source: FSAP Analysis.

Figure 11. United Kingdom: Policy Support

The government has been winding down exceptional support, ...

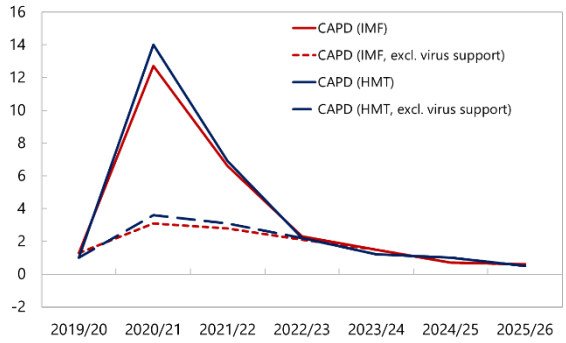
OBR Projections: Deficit and Debt
(Percent of GDP)



Sources: ONS and OBR.

...while maintaining some stimulus in the near term.

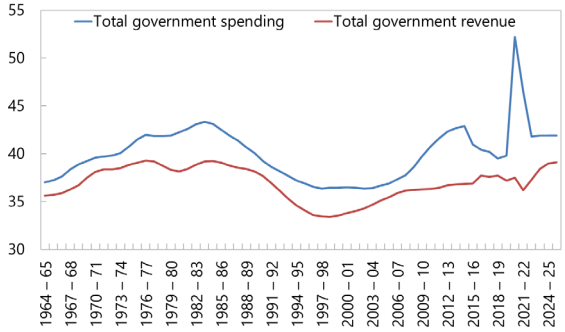
Cyclically Adjusted Primary Deficit
(Percent of GDP)



Sources: IMF and HMT.

A medium-term consolidation plan has been specified, which relies on raising revenues...

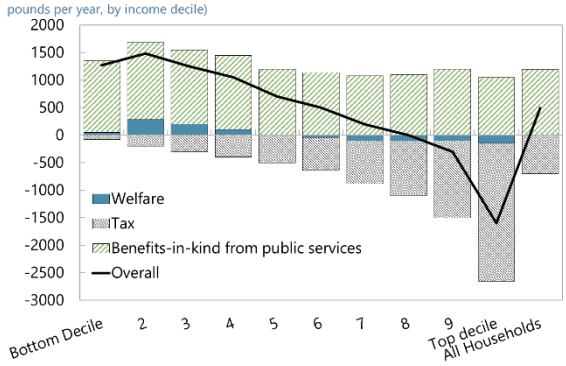
Government Spending and Tax Ratios
(Percent of GDP)



Note: 10 year moving averages were calculated for 1964-2015.
Source: IFS.

...and policy changes would overall have a progressive impact.

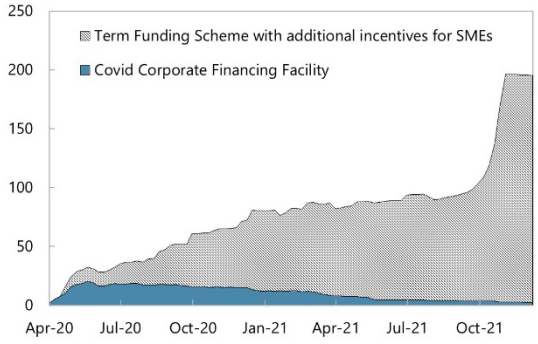
Distributional Analysis of Tax and Spending Changes in Recent Budget
(Impact of decisions announced since Spending Round 2019 on households in 2024-25, pounds per year, by income decile)



Source: HM Treasury Autum Budget(2021).

The BoE expanded its lending facilities...

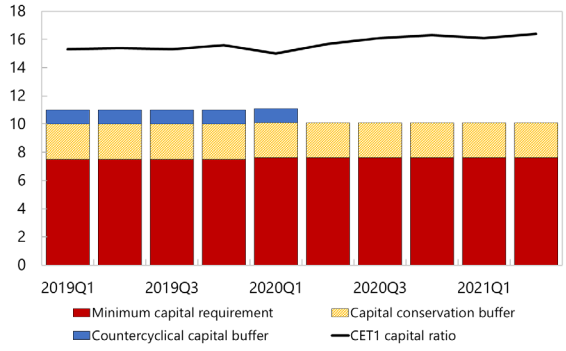
Covid Funding Facilities Operated by the Bank of England
(Net outstanding volume, £ billions)



Source: Bank of England.

...and released capital buffers.

Major UK Banks' Capital Buffers
(Percent)



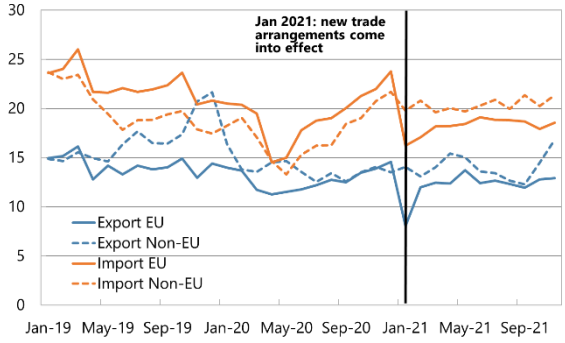
Source: Bank of England.

Figure 12. United Kingdom: Brexit Impacts

Trade disruptions have begun to reverse, but trade in goods with the EU remains lower than non-EU partners.

Trade in Goods

(Exports plus imports, SA, Billion Chn 2019 GBP)

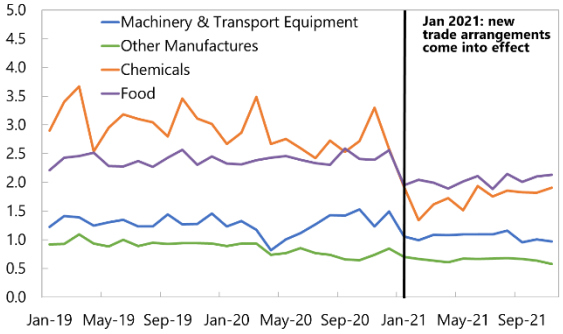


Source: ONS.

Some categories of goods imports have shifted from the EU to non-EU countries.

Selected Goods Import - EU vs. Non-EU

(Ratio of EU to non-EU imports volumes)

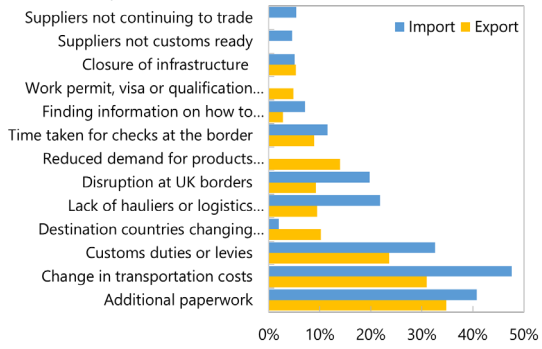


Note: No similar effects were observed for major goods categories in exports.
Source: ONS.

Administrative burdens and logistics constraints have become top challenges to trading businesses.

Export and Import Challenges

(Percent of responses)

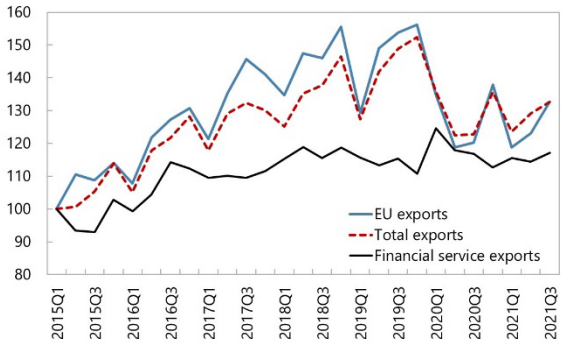


Source: ONS-Business Insights and Conditions Survey, September 2021.

Trade in financial services has seen mild impacts so far.

Exports in Services

(Index, 2015Q1=100)

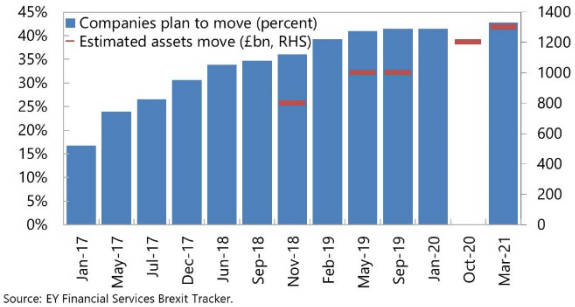


Source: ONS.

The migration of financial services appears to have leveled off, broadly at expected levels.

Financial Businesses Migration to the EU

(Out of 222 financial firms)

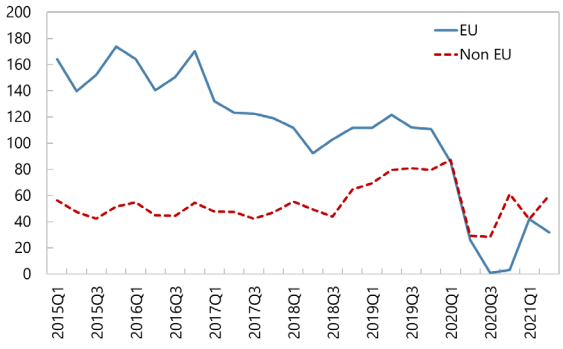


Source: EY Financial Services Brexit Tracker.
Note: The EY Brexit Tracker monitors and records the public announcements made by 222 of the largest financial service companies with significant operations in the UK, across universal banks, investment banks, brokerages, wealth and asset managers, retail banks, private equity houses, insurers, insurance brokers and FinTechs.

The combination of Brexit and pandemic appears to have had a significant impact on the supply of foreign labor.

National Insurance Number Registration

(Thousands, Foreign adults entering the UK)

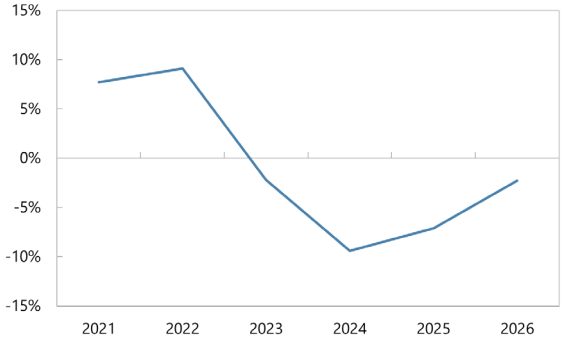


Source: Department for Work and Pensions.

Figure 13. United Kingdom: Demand Outlook

Corporate tax changes are expected to pull forward investment...

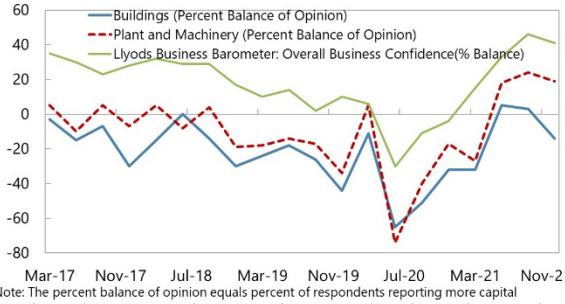
Budget Impact on Investment
(Percent relative to baseline projection)



Source: IMF staff calculations.

...and planned business investment in plant and machinery indeed seems to be responding.

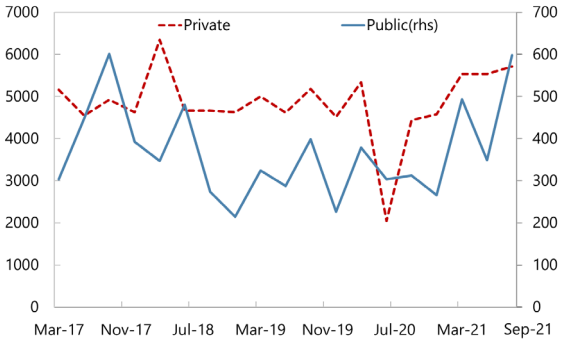
Expectation of Capital Expenditure Authorizations
(Percent balance)



Note: The percent balance of opinion equals percent of respondents reporting more capital expenditure authorizations minus those reporting less over next 12 months versus last 12 months. Similarly, overall business confidence is calculated by taking the difference between the percent of respondents reporting expected improvement and worsening of business activity over next 12 months.
Sources: CBI and Haver Analytics.

Private residential investment plans have also picked up, partly reflecting recovery from low pandemic levels.

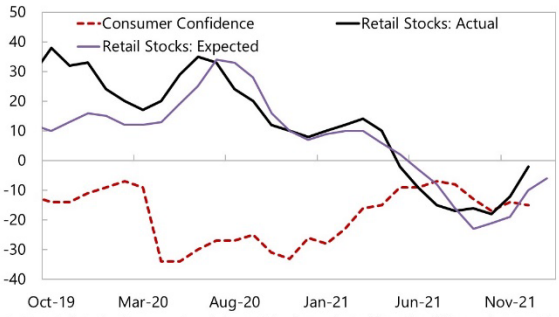
Construction New Orders: New Housing
(NSA, Mil. GBP)



Sources: ONS and Haver Analytics.

Consumer confidence has not yet fully recovered, also reflecting supply constraints.

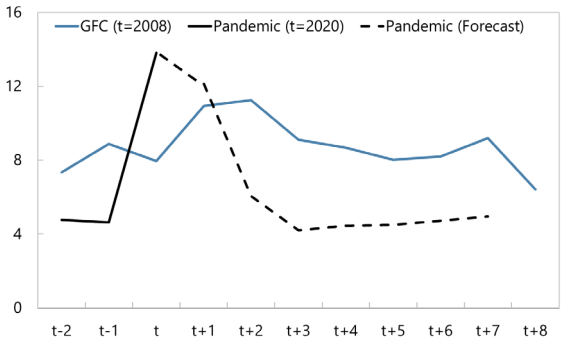
Consumer Confidence and Retail Stocks
(Percent balance of opinion)



Note: For retail stocks, the percentage balance is the figure derived from the difference between the weighted percentage of companies answering in the positive, minus the those replying in the negative.
Sources: Gfk/NOP European Commission, CBI, and Haver Analytics.

Household savings are expected to wind down at a pace faster than the post-GFC period.

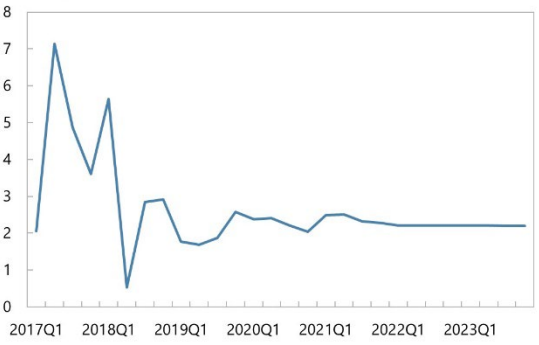
Household Savings Rate: GFC and Pandemic
(Percent change)



Source: IMF staff calculations.

Partners' demand is also expected to stabilize.

Trade Partner Demand Weighted by Exports
(Y-o-y percent change)

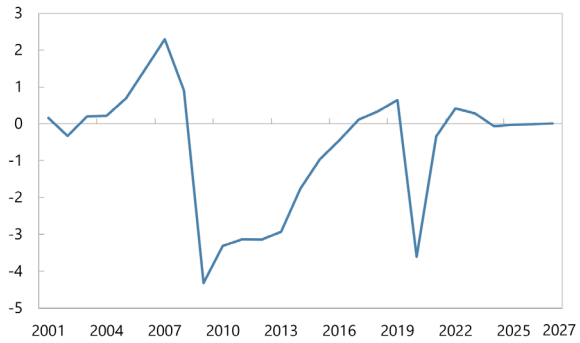


Source: IMF staff calculations.

Figure 14. United Kingdom: Unwinding of Supply Constraints

Output gap is expected to close over the medium term, ...

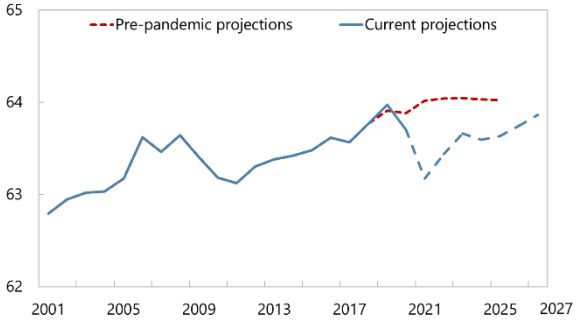
Output Gap
(Percent of potential GDP)



Source: IMF staff calculations.

...but labor participation will not fully recover.

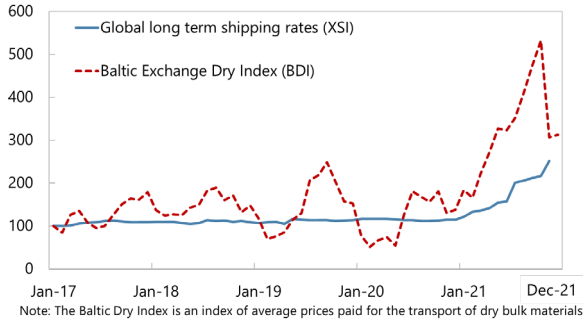
Labor Participation Rate
(Percent)



Note: Dashed lines represent staff projections. Pre-pandemic projections are as of January 2020.
Sources: Haver Analytics and IMF staff calculations.

Long-term shipping contracts suggest shipping disruptions will continue to ease gradually, ...

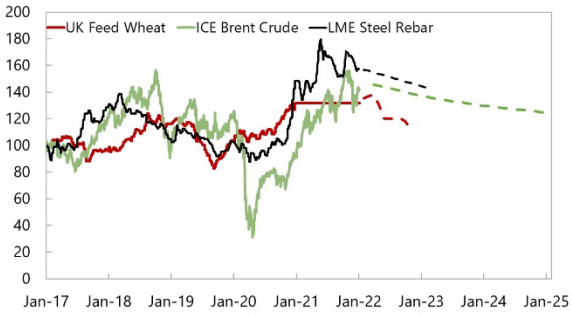
Shipping Costs
(Index, Jan-2017=100)



Note: The Baltic Dry Index is an index of average prices paid for the transport of dry bulk materials across more than 20 routes. Global long term shipping rates includes those delivered from freight forwards and shippers based on contracts longer than 88 days.
Sources: Xeneta and Haver Analytics.

...while the commodity price outlook also suggests easing of supply-demand imbalances...

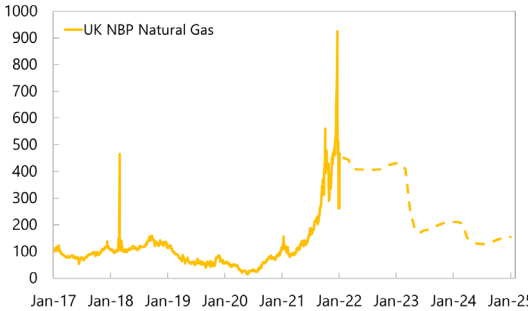
Commodity Historical and Forward Prices
(Index, Jan-2017=100)



Note: Continuous and dashed lines depict historical spot and future prices respectively.
Source: Bloomberg Finance LP.

...especially in natural gas markets.

Natural Gas Historical and Forward Prices
(Index, Jan-2017=100)



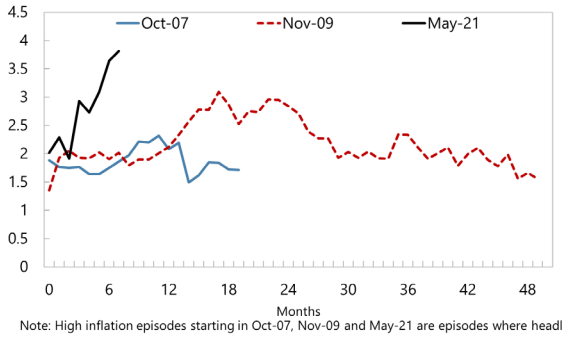
Note: Continuous and dashed lines depict historical spot and future prices respectively.
Source: Bloomberg Finance LP.

Figure 15. United Kingdom: Inflation Expectations

Core inflation has increased faster than previous high inflation episodes.

CPIH Core Inflation Episodes

(YoY Percent Change, NSA, 2015=100)

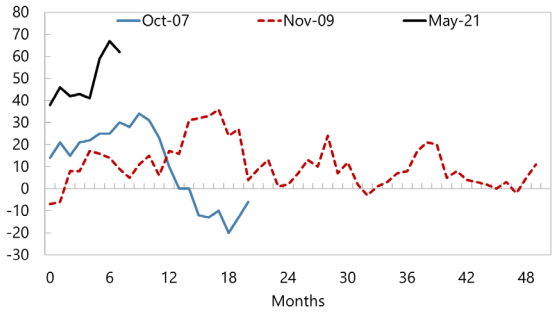


Note: High inflation episodes starting in Oct-07, Nov-09 and May-21 are episodes where headline inflation peaked above 3.5 percent year on year.
Sources: ONS and Haver Analytics.

...as have industrial price expectations.

CBI Industrial Trends Survey

(Expectations of average prices of domestic prices over next 3 months, percent balance)

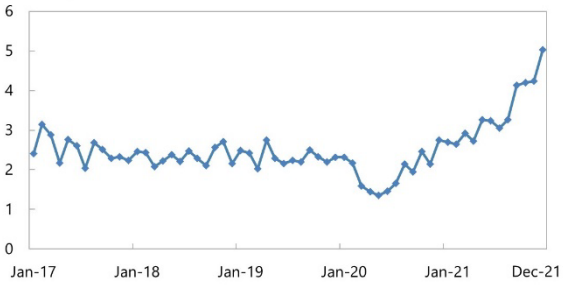


Note: High inflation episodes starting in Oct-07, Nov-09 and May-21 are episodes where headline inflation peaked above 3.5 percent year on year.
Sources: CBI and Haver Analytics.

and firms' pricing intentions have kept pace.

Firms' Pricing Intentions

(Percentage growth rate)

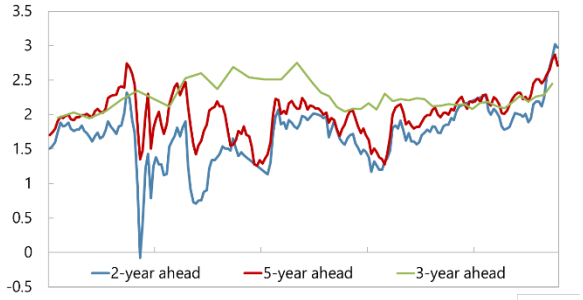


Notes: Expected price growth data are based on the question: 'Looking ahead, from now to 12 months from now, what approximate % change in your average price would you expect in each of the following scenarios: lowest, low, middle, high and highest?'. Respondents were then asked to assign a probability to each scenario (values must sum to 100%).
Source: Bank of England Decision Maker Panel.

Medium-term inflation expectations have climbed, ...

Inflation Expectations

(Percent)

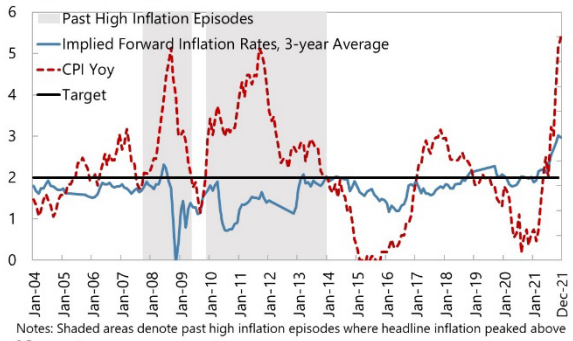


Note: 2-year and 5-year ahead expectations are calculated from UK government securities implied forward implation rates. 3-year ahead is the mean CPI consensus forecast.
Sources: Bank of England, Consensus Forecast, and Haver Analytics.

and forward implied inflation has risen more sharply than previous high inflation episodes, ...

Inflation and Inflation Expectations

(Y-o-y percent change)

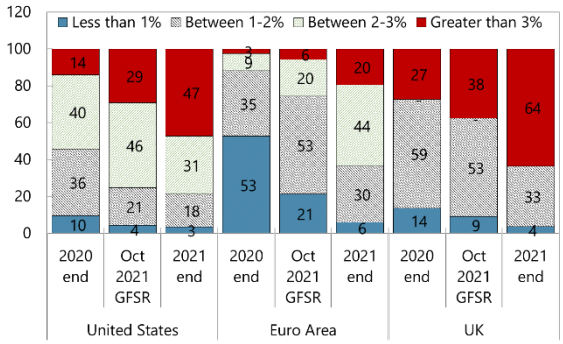


Notes: Shaded areas denote past high inflation episodes where headline inflation peaked above 3.5 percent year on year.
Sources: Bank of England, ONS, and Haver Analytics.

Markets are betting on higher inflation in the UK compared with the US and euro area.

Market Implied Probability of Inflation Outcomes

(Percent, over five years)



Source: IMF Financial Stability Report.

Table 1. United Kingdom: Selected Economic Indicators, 2018–23

	2018	2019	2020	2021 Est.	2022 Projections	2023 Projections
Real Economy (change in percent)						
Real GDP	1.7	1.7	-9.4	7.2	4.7	2.3
Private final domestic demand	1.8	1.0	-10.7	4.9	7.4	2.3
CPI, period average	2.5	1.8	0.9	2.6	6.3	3.1
CPI, end-period	2.1	1.3	0.6	5.4	5.0	2.2
Unemployment rate (in percent) 1/	4.1	3.8	4.5	4.5	4.3	4.2
Gross national saving (percent of GDP)	14.0	15.3	14.0	13.8	13.3	13.6
Gross domestic investment (percent of GDP)	17.9	18.0	16.7	17.2	17.9	18.0
Public Finance (fiscal year, percent of GDP)						
Public sector overall balance	-2.0	-2.5	-14.9	-7.7	-3.1	-2.2
Public sector cyclically adjusted primary balance (staff estimates)	-0.8	-1.3	-11.5	-5.6	-2.4	-1.3
Public sector net debt 2/	78.9	84.1	96.6	93.7	91.2	91.5
Money and Credit (end-period, 12-month percent change)						
M4 3/	2.1	3.8	13.5	6.9	...	...
Net lending to private sector 3/	3.6	3.2	3.7	3.0	...	...
Interest rates (percent; year average)						
Three-month interbank rate	0.7	0.8	0.3	0.1	...	...
Ten-year government bond yield	1.5	0.9	0.3	0.8	...	...
Balance of Payments (percent of GDP)						
Current account balance 4/	-3.9	-2.7	-2.6	-3.4	-4.7	-4.3
Trade balance	-1.3	-0.9	0.1	-1.1	-2.4	-2.1
Net exports of oil	-0.1	-0.1	0.1	0.1	0.1	0.1
Exports of goods and services (volume change in percent)	2.8	3.4	-13.9	-1.4	3.9	8.5
Imports of goods and services (volume change in percent)	3.1	2.9	-15.9	2.4	9.7	7.3
Terms of trade (percent change)	0.2	0.8	1.1	-0.6	0.6	0.4
FDI net 4/	-0.2	-1.8	-3.0	1.0	0.8	0.2
Reserves (end of period, billions of US dollars)	176.6	182.7	186.7	203.7	...	...
Exchange Rates						
Exchange rate regime				Floating		
Bilateral rate (December 31, 2021)				US$1 = £0.7420		
Nominal effective rate (2010=100, year average) 3/	97.9	97.7	98.1	102.4	...	...
Real effective rate (2010=100, year average) 3/	98.8	98.4	98.6	102.4	...	...
Memorandum items:						
Nominal GDP (billions GBP)	2,174	2,255	2,153	2,333	2,591	2,736
Nominal GDP (billions USD)	2,905	2,880	2,762	3,211	...	...

Sources: Bank of England; IMF's Information Notice System; HM Treasury; Office for National Statistics; and IMF staff calculations.

1/ ILO unemployment; based on Labor Force Survey data.

2/ Public sector net debt is defined as public sector gross debt minus liquid assets held by general government and non-financial public corporations. It includes operations from Bank of England. The fiscal year begins in April. Debt stock reported in this table has been transformed into calendar year by using end-of-fiscal year information on debt and centered-GDP as a denominator.

3/ 2021 values are estimated using November data.

4/ Historical annual series available until 2020.

Table 2. United Kingdom: Financial Soundness Indicators, 2016–20

	2016	2017	2018	2019	2020
Capital Adequacy					
Regulatory Capital to Risk-Weighted Assets	20.8	20.5	21.4	21.3	21.6
Regulatory Tier 1 Capital to Risk-Weighted Assets	16.9	17.1	17.9	17.9	18.5
Capital to Assets	7.0	6.8	6.8	6.8	6.9
Credit Risk					
Non-performing Loans Net of Provisions to Capital	3.4	2.9	6.8	6.4	6.8
Non-performing Loans to Total Gross Loans	0.9	0.7	1.1	1.1	1.2
Foreign-Currency-Denominated Loans to Total Loans	58.1	57.6	59.2	57.7	57.1
Sectoral Distribution of Total Loans					
Residents	47.9	47.4	46.4	47.5	47.5
Deposit-takers	10.0	9.3	7.7	8.3	6.4
Central bank	0.0	0.0	0.0	0.0	0.0
Other financial corporations	11.7	12.1	12.9	13.3	13.8
General government	0.2	0.7	0.2	0.2	0.2
Nonfinancial corporations	6.8	6.1	6.6	6.7	7.2
Other domestic sectors	19.2	19.3	19.0	19.1	19.9
Nonresidents	52.1	52.6	53.6	52.5	52.5
Geographic distribution of Total Loans					
Domestic economy	54.5	53.8	46.4	47.5	47.5
Advanced economies, excluding China	35.9	37.1	33.4	36.6	37.3
Other emerging market and developing countries, including China	9.7	9.1	20.2	15.9	15.1
Africa	1.5	0.6	0.5	0.6	0.4
Sub-Saharan Africa	1.5	0.6	0.5	0.5	0.4
Central and Eastern Europe	0.6	0.5	0.4	0.4	0.3
Developing Asia, including China	4.7	5.2	4.5	4.7	4.6
Middle East	1.8	1.7	1.5	1.6	1.6
Western Hemisphere	1.0	0.9	0.9	0.9	0.8
Profitability					
Return on Assets	0.3	0.5	0.5	0.5	0.6
Return on Equity	3.8	7.6	7.5	7.1	10.1
Interest Margin to Gross Income	46.2	45.9	48.1	42.4	40.6
Non-interest Expenses to Gross Income	76.3	70.8	75.1	61.8	67.0
Trading Income to Total Income	11.3	14.5	14.9	21.2	22.0
Personnel Expenses to Non-interest Expenses	48.2	44.8	39.8	46.6	46.2
Liquidity					
Liquid Assets to Total Assets (Liquid Asset Ratio)	19.6	22.3	25.1	23.5	23.7
Liquid Assets to Short Term Liabilities	37.9	37.8	40.7	44.4	49.4
Customer Deposits to Total (Non-interbank) Loans	119.9	126.4	129.1	122.9	130.7
Foreign-Currency-Denominated Liabilities to Total Liabilities	20.5	22.4	22.8	21.1	21.4
Net Open Position in Foreign Exchange to Capital	-3.4	-3.7	-3.4	-1.1	-8.4
Net Open Position in Equities to Capital	125.2	143.8	125.1	146.7	137.0
Gross Asset Position in Financial Derivatives to Capital	537.5	447.3	400.5	562.3	554.3
Gross Liability Position in Financial Derivatives to Capital	530.1	441.1	393.1	554.0	545.6

Source: IMF FSI database.

Table 3. United Kingdom: Implementation of Past Fund Advice	
IMF 2020 Article IV Selected Recommendations	**Actions Between 2021 Article IV and November 2021**
Monetary Policy	
Loosen policy, if necessary, by further extending QE, introducing negative rates, or using other monetary policy tools (e.g., additional Term Funding to banks).	Loosening did not prove necessary. The authorities undertook technical preparations for negative policy rates.
Fiscal Policy	
Additional fiscal stimulus to invigorate the recovery, about 1–2 percent beyond budgetary plans.	The Spring 2021 budget included tax and expenditure stimulus measures equivalent to about 2 percent of GDP. The Autumn budget included additional stimulus measures of about 0.4 percent of GDP.
Increase public investment in infrastructure, including on green projects.	Funding for roads has increased substantially, while green investment was also raised (though there is scope to raise it further to meet the Net Zero Strategy targets).
Strengthen the social safety net (extending UC's pandemic uplift; adjusting the level of earnings and speed at which it is withdrawn; and improving fairness of housing support under UC).	The UC uplift was extended from March to September 2021. The Autumn budget included a softening of the phasing out, leaving it at 55 percent of the initial complement.
Enhance ALMPs and increase funding by 0.1–0.2 percent of GDP.	Funding in ALMPs has increased but to a lesser degree (about 0.0012 percent of GDP).
Consider timing and composition of fiscal adjustment when the pandemic abates, starting with a Spending Review in 2021.	The authorities laid out a medium-term consolidation plan in the March 2021 budget, and further modified this in the October Supplementary Budget, drawing on the findings of the Spending Review.
Replace pension triple lock by CPI indexation after retirement.	The triple lock was suspended for one year.
Raise revenues (which will necessitate higher rates on major tax bases).	PIT thresholds were frozen and CIT rates and national insurance contributions were raised.

Table 4. United Kingdom: Selected Fiscal Measures Announced
(March and October 2021 Budgets, cumulative size)

	2021–22 (percent GDP)	2023–26 (percent GDP)	Comments
Revenue Measures			
Corporate tax rate increase		1.9	19 percent rate for profits up to £50,000 and 25 percent rate for profits over £250,000, from April 2023.
Income tax threshold freezes		0.7	Maintain personal allowance and higher rate threshold at 2021–22 levels up to 2025–26.
Increase in national contributions		1.3	1.25 percent increase from April 2022.
Increase dividend taxes		0.1	1.25 percent increase from April 2022.
Capital allowance super-deduction	-1.1	0.1	130 percent deduction for main rate assets and 50 percent 1st year allowance for special rate assets for 2 years.
Cuts in business rates*	-0.9	-0.3	Targeted to specific sectors (e.g., 50 percent relief for retail, hospitality and leisure).
VAT reduced rates for hospitality, accommodation, and attractions*	-0.8		Targeted to 5 percent from 15 July 2020 until September 30, 2021 and 12.5 percent until March 31, 2022, when it will return to 20.
Expenditure Measures			
Support for households	1.2		Extension of CRJS, SEISS and UC uplift from March to September 2021.
Support for businesses*	0.8		Extension of Restart Grants.
UC taper and work allowances	0.3	0.4	UC taper rate reduced from 63 to 55 percent and a £500 p.a. increase in work allowances introduced from 1 December 2021.
Traineeships and reskilling programs	0.1		£150m extension of programs for 16–24-year-olds and £500m for training health staff.
Suspension of the pension triple lock uprating mechanism		-0.2	Suspended for 1 year (2022–23).
Plan for Health and Social Care spending		1.4	95 percent of this spending envelope is for health backlogs.
*Newly introduced targeted pandemic support			

Table 5. United Kingdom: Statement of Public Sector Operations, 2019/20–26/27

(Percent of GDP, unless otherwise noted)

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
			Est.		Staff projections			
Revenue	36.6	37.0	36.1	36.2	37.0	37.1	37.2	37.4
Taxes	26.3	26.3	25.9	26.4	27.2	27.3	27.6	28.1
Social contributions	6.4	6.7	6.6	6.8	6.8	6.7	6.6	6.4
Other revenue	3.9	4.0	3.7	3.0	3.0	3.0	3.0	2.9
Of which: Interest income	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Expenditure	39.1	51.9	43.8	39.3	39.3	38.8	38.8	38.9
Expense	38.3	50.7	42.8	38.2	38.1	37.7	37.7	37.8
Consumption of fixed capital	2.3	2.5	2.3	2.1	2.2	2.2	2.2	2.2
Interest	2.3	1.9	2.5	2.3	2.2	2.1	2.1	2.1
Other	33.6	46.3	37.9	33.8	33.8	33.4	33.5	33.5
Net acquisition of nonfinancial assets	0.8	1.1	1.0	1.1	1.2	1.1	1.1	1.1
Gross operating balance	-1.7	-13.7	-6.6	-2.0	-1.1	-0.5	-0.5	-0.3
Net lending/borrowing (overall balance)	-2.5	-14.9	-7.7	-3.1	-2.2	-1.6	-1.6	-1.4
Current balance 1/	-0.7	-11.5	-5.1	-0.6	0.4	0.9	1.0	1.1
Primary balance	-1.2	-14.0	-6.2	-1.8	-1.2	-0.6	-0.6	-0.6
Cyclically adjusted overall balance	-2.6	-12.9	-7.1	-3.6	-2.4	-1.6	-1.5	-1.5
Cyclically adjusted current balance 1/	-0.7	-9.5	-4.6	-1.1	0.3	0.9	1.0	1.0
Cyclically adjusted primary balance (CAPB)	-1.3	-12.0	-5.6	-2.4	-1.3	-0.6	-0.5	-0.5
CAPB (percent of potential GDP)	-1.3	-11.5	-5.6	-2.4	-1.3	-0.6	-0.5	-0.5
General government gross debt	83.0	96.3	95.2	90.2	91.2	91.8	90.6	88.9
Public sector gross debt 2/	92.6	110.0	110.6	106.0	105.4	102.0	97.7	93.5
Public sector net debt 3/	84.1	96.6	93.7	91.2	91.5	88.2	84.5	84.5
Public sector net debt excl. BoE schemes	83.3	95.5	92.4	89.9	90.3	87.3	83.9	84.0
Memorandum items:								
Output gap (percent of potential)	-0.1	-4.0	0.5	0.8	0.0	-0.1	0.0	0.0
Deflator growth (Percent)	2.3	6.0	0.4	6.7	2.4	2.3	2.0	2.1
Real GDP growth (percent)	0.6	-10.2	10.4	4.4	1.2	1.5	1.5	1.5
Nominal GDP growth (percent)	2.9	-4.9	11.0	11.4	3.6	3.8	3.5	3.6
Nominal GDP (in billions of pounds)	2260	2149	2385	2658	2754	2858	2959	3066
Potential GDP growth (percent)	1.2	-6.5	5.4	4.1	2.1	1.6	1.4	1.4
Primary (non-interest) deficit 4/	1.2	14.1	6.2	1.9	1.2	0.7	0.6	0.5
Primary (non-interest) revenue and grants 4/	36.3	36.9	35.9	35.9	36.7	36.8	36.9	37.1
Primary (non-interest) expenditure 4/	37.6	51.0	42.1	37.8	37.9	37.5	37.5	37.6

Sources: HM Treasury; Office for National Statistics; and IMF staff calculations.

1/ Includes depreciation.

2/ Public sector is defined as consolidated public sector. Until 2020, it is on a Maastricht treaty basis and includes temporary effects of financial sector intervention.

3/ Public sector net debt is defined as public sector gross debt minus liquid assets held by general government and non-financial public corporations.

4/ These series are used for the purpose of the DSA, which defines interest revenues and expenses as net of the public pension system.

Table 6. United Kingdom: Medium-Term Scenario, 2019–27

(Percentage change, unless otherwise indicated)

	2019	2020	2021	2022	2023	2024	2025	2026	2027
			Est.			Projections			
Real GDP	1.7	-9.4	7.2	4.7	2.3	1.3	1.6	1.5	1.5
Q4/Q4 1/	1.2	-6.4	6.3	3.8	0.5	1.9	1.4	1.5	1.5
Real domestic demand	1.6	-9.9	8.1	6.3	2.2	1.1	1.7	1.5	1.4
Private consumption	1.3	-10.5	5.2	6.7	2.2	1.9	1.9	1.2	1.3
Government consumption	4.2	-5.4	14.7	2.0	1.5	1.2	1.7	2.1	2.1
Fixed investment	0.5	-9.4	5.5	8.0	3.5	-2.0	1.0	1.5	1.4
Public	5.0	2.7	14.7	-2.1	6.5	-1.0	1.1	1.8	1.8
Residential	-0.1	-11.4	12.6	4.0	2.6	-1.3	0.5	1.3	1.3
Business	0.9	-11.4	-1.3	14.2	3.2	-3.0	1.0	1.5	1.3
Stocks 2/	0.2	-0.7	0.6	0.3	-0.1	0.2	0.0	0.0	0.0
Gross national saving (percent of GDP)	15.3	14.0	13.8	13.3	13.6	13.6	13.5	13.5	13.5
Gross domestic investment (percent of GDP)	18.0	16.7	17.2	17.9	18.0	17.6	17.5	17.5	17.5
External balance 2/	0.1	0.8	-1.1	-1.7	0.1	0.2	-0.2	0.0	0.0
Exports of Goods and Services	3.4	-13.9	-1.4	3.9	8.5	3.5	2.6	2.5	2.5
Imports of Goods and Services	2.9	-15.9	2.4	9.7	7.3	2.6	3.0	2.3	2.3
Current account 3/	-2.7	-2.6	-3.4	-4.7	-4.3	-4.0	-4.0	-4.0	-4.0
CPI Inflation, period average	1.8	0.9	2.6	6.3	3.1	2.0	2.0	2.0	2.0
CPI Inflation, end period	1.3	0.6	5.4	5.0	2.2	2.0	2.0	2.0	2.0
GDP deflator, period average	2.0	5.3	1.1	6.1	3.2	2.2	2.1	2.0	2.0
Output gap 4/	0.6	-3.6	-0.1	0.4	0.2	-0.1	0.0	0.0	0.0
Potential output	1.4	-5.4	3.4	4.1	2.6	1.6	1.5	1.5	1.5
Employment and productivity									
Employment	1.1	-0.8	-0.3	1.1	1.0	0.2	0.9	0.8	0.8
Unemployment rate 5/	3.8	4.5	4.5	4.3	4.2	4.5	4.2	4.2	4.2
Productivity 6/	0.6	-8.6	7.6	3.5	1.3	1.1	0.7	0.7	0.7
Memorandum items:									
Private final domestic demand	1.0	-10.7	4.9	7.4	2.3	1.1	1.8	1.3	1.3
Household saving rate 7/	4.6	13.8	12.1	6.0	4.2	4.4	4.5	4.7	5.0
Private saving rate	14.1	22.2	19.1	13.6	12.0	11.5	11.0	10.6	10.3
Credit to the private sector	3.2	3.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Population growth	0.5	0.4	0.7	0.5	0.4	0.4	0.4	0.4	0.4
GDP per capita growth	1.1	-9.8	6.5	4.2	1.9	0.9	1.2	1.1	1.1

Sources: Office for National Statistics; and IMF staff estimates.
1/ Percentage change in quarterly real GDP in the fourth quarter on four quarters earlier.
2/ Contribution to the growth of GDP.
3/ In percent of GDP.
4/ In percent of potential GDP.
5/ In percent of labor force, period average; based on the Labor Force Survey.
6/ Whole economy, per hour worked.
7/ In percent of total household available resources.

Table 7. United Kingdom: Balance of Payments, 2019–27

(Percent of GDP)

	2019	2020	2021 Est.	2022	2023	2024 Projections	2025	2026	2027
Current account	-2.7	-2.6	-3.4	-4.7	-4.3	-4.0	-4.0	-4.0	-4.0
Balance on goods and services	-0.9	0.13	-1.07	-2.4	-2.1	-1.9	-2.0	-1.9	-1.8
Trade in goods	-6.1	-6.0	-6.8	-8.0	-7.8	-7.5	-7.6	-7.6	-7.5
Exports	16.5	14.3	13.6	13.7	14.2	14.5	14.7	15.0	15.3
Imports	-22.6	-20.4	-20.4	-21.7	-22.0	-22.0	-22.4	-22.6	-22.8
Trade in services	5.2	6.1	5.8	5.6	5.7	5.7	5.6	5.6	5.6
Exports	14.5	13.8	12.8	12.1	13.1	13.4	13.3	13.3	13.3
Imports	-9.3	-7.6	-7.0	-6.5	-7.4	-7.7	-7.7	-7.7	-7.6
Primary income balance	-0.6	-1.5	-1.4	-1.4	-1.5	-1.5	-1.3	-1.4	-1.4
Receipts	9.7	6.3	8.0	9.0	9.1	9.1	9.3	9.3	9.3
Payments	10.2	7.8	9.4	10.4	10.6	10.6	10.6	10.7	10.7
Secondary income balance	-1.2	-1.3	-0.9	-0.9	-0.8	-0.7	-0.7	-0.7	-0.7
Capital and financial account	-3.1	-2.9	-3.4	-4.7	-4.3	-4.0	-4.0	-4.0	-4.0
Capital account	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Financial account	-3.1	-3.0	-3.5	-4.8	-4.4	-4.1	-4.0	-4.1	-4.0
Direct investment	-1.8	-3.0	1.0	0.8	0.2	0.2	0.2	0.2	0.2
Abroad	-1.7	-1.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Domestic	0.1	1.1	2.0	2.2	2.8	2.8	2.8	2.8	2.8
Portfolio investment	1.3	-0.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4
Abroad	4.4	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Domestic	3.0	3.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Financial derivatives	0.4	1.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other investment	-3.0	-0.8	0.7	-0.4	0.6	0.9	1.0	0.9	1.0
Abroad	-9.9	18.1	-0.7	1.0	1.0	1.0	1.0	2.0	2.0
Domestic	-6.9	18.9	-1.4	1.4	0.4	0.1	0.0	1.1	1.0
Change in reserve assets	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net errors and omissions	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Terms of trade (y/y percent change)	0.8	1.1	-0.6	0.6	0.4	0.0	0.1	0.1	0.1

Sources: Office for National Statistics; and IMF staff estimates.

Note: a negative sign on the financial account indicates financial inflows.

Table 8. United Kingdom: Net Investment Position, 2019–27

(Percent of GDP)

	2019	2020	2021 Est.	2022	2023	2024	2025	2026	2027
				Projections					
Net investment position	-25.5	-21.1	-21.3	-22.3	-23.9	-25.6	-27.1	-28.6	-30.0
Assets	494	582	553	519	506	501	495	491	487
Liabilities	519	603	575	541	530	527	523	520	517
Net direct investment	-2.7	-2.8	-1.6	-0.7	-0.4	-0.2	0.0	0.2	0.4
Direct investment abroad	78.3	88.2	84.4	79.0	77.8	78.2	78.4	78.7	79.0
Direct investment in the UK	81.0	91.1	86.0	79.7	78.2	78.4	78.5	78.5	78.6
Net Portfolio investment	-38.9	-34.9	-35.9	-36.1	-37.9	-40.4	-42.7	-45.0	-47.2
Portfolio investment abroad	122.1	137.1	129.9	120.4	117.4	116.9	116.1	115.5	115.0
Portfolio investment in the UK	161.0	171.9	165.8	156.5	155.3	157.2	158.9	160.5	162.1
Net financial derivatives	1.9	3.2	3.1	3.0	3.0	3.0	3.1	3.2	3.2
Assets	97.4	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2
Liabilities	95.5	131.0	131.1	131.2	131.2	131.2	131.1	131.0	131.0
Net other investment	8.4	7.4	7.6	6.4	6.7	7.3	8.0	8.7	9.4
Other investment abroad	190.0	216.6	199.2	180.4	171.8	167.0	162.2	158.6	155.1
Other investment in the UK	181.6	209.2	191.6	173.9	165.1	159.7	154.1	149.9	145.7
Reserve assets	5.8	6.1	5.6	5.1	4.8	4.7	4.5	4.3	4.2
Memorandum items:									
Change in the net investment position	-12.8	5.6	-1.8	-3.1	-2.8	-2.5	-2.4	-2.5	-2.4
Current account balance	-2.7	-2.6	-3.4	-4.7	-4.3	-4.0	-4.0	-4.0	-4.0

Source: Office for National Statistics.

Table 9. United Kingdom: Strengthening Automatic Stabilizers

Channels through which automatic stabilizers could be enhanced (*)	UK's pandemic support programs relevant for each channel (^)	Options for the UK to consider
Revenue Stabilizers		
• **Connect business support to economic cycle**. Governments could introduce tax deferrals or fixed tax relief in case of large demand shocks that significantly disrupt business activity.	Elements of this effectively brought in through tax deferral or temporary tax relief: • VAT payments: Cumulative amounts between 20 March 2020 and 30 June 2020 deferred to 31 March 2021, with the ability to seek a further extension granted later through the New Payment Scheme. Cumulative total £33.5bn. • Business rates relief for retail, hospitality and nurseries: About 382,000 businesses and nurseries eligible for expanded retail, costing about £11.5bn.	• Consider legislating for a contingent VAT deferral that could be applied in cases of significant disruption to business activity, using turnover or sector data to better target support.
• **Introduce investment tax-deductions during downturns**. These can help reduce the cost of capital, ease credit and stimulate investment during downturns (e.g., cyclical bonus depreciations or cyclical loss-carry backward schemes in Canada, France, Germany, the US or the UK).	• A super-deduction was brought in: For expenditure incurred from 1 April 2021 until the end of March 2023, companies can claim 130 percent capital allowances on qualifying plant and machinery investments. This means that for every pound a company invests, their taxes are cut by up to 25 pence.	• The super-deduction could be extended beyond 2023 for green projects.
Expenditure Stabilizers		
• **Linking Unemployment Insurance and UC uplifts to business cycle**. The generosity of the unemployment benefits could increase and its duration be linked to the duration of the downturn (e.g., Canada).	Uplift brought in on a temporary basis: • In March 2020 the government announced an uplift to universal credit and working tax credits worth £20 a week. Initially planned to last for a year, the uplift to Universal Credit was extended for a further six months and an equivalent one-off payment of £500 was provided to eligible Working Tax Credit claimants in April 2021.	• The UC uplift could be made permanent, given distributional considerations, and the gaps in the UK's safety net. • The authorities could consider legislating an automatic extension of the duration of unemployment benefits to be triggered in times of high unemployment or due to natural calamities or disaster.
• **Make spending in ALMPs contingent on the economic cycle**. Spending on ALMPs would reduce unemployment thus sustaining individuals' income and limiting unemployment spending (e.g., Australia, Denmark and Switzerland).	Programs were upgraded with a mix of temporary and permanent changes: • Introduction of the Kickstart program for young people. • Introduction of the Restart program for adults in long-term unemployment. • Increase in the number of work coaches and additional funding for ALMPs.	• More automatic funding of active labor market policies for youth (e.g., Kickstart-like), is advisable, while preserving some discretion to adapt their design. • See Table 13 for more on ALMPs.
• **Extend the use of Furlough and Short-term Working Schemes**. Employers can reduce the number of hours worked while the program compensates workers for the loss of income (e.g., Belgium, Italy, Germany, and Japan).	• Coronavirus Job Retention Scheme (CJRS) and Self-Employment Income Support Scheme (SEISS). • 11.7 million jobs furloughed by 1.3 million employers, via grants worth £70 billion. • SEISS supported 2.9 million self-employed individuals. £28.1 billion has been paid in grants.	• The Coronavirus Job Retention Scheme (CJRS) should not be part of the regular toolkit of automatic stabilizers in the UK (given existing private sector labor contracting approaches) and should be best considered for responding to very large, temporary, and non-structural shocks.

(*) According to Maravelle and Rawdanowitz (2020), 'How Effective are Automatic Stabilizers in OECD Countries' OECD Economics Dept. WP, automatic stabilizers in the OECD absorb around 60 percent of a specific negative shock to market income across countries, with significant differences across economies in the effectiveness of automatic stabilizers, ranging from 80 percent in some countries like the Netherlands and Germany, to below 40 percent in other countries like Greece and Japan. For a summary of possible changes to strengthen stabilizers see: Caldera and others (2020), 'Strengthening Automatic Stabilizers Could Help Combat the Next Downturn: https://voxeu.org/article/strengthening-automatic-stabilisers-could-help-combat-next-downturn.

(^) See: https://researchbriefings.files.parliament.uk/documents/CBP-8938/CBP-8938.pdf.

Table 10. United Kingdom: Major Changes to UK's Fiscal Rules, 1998–2021	
Year	**Rules**
1998	• The current budget to be balanced on average over an economic cycle; and • The national debt to be less than 40 percent of national income.
2008	• Fiscal rules were suspended during the financial crisis and replaced with a target to reduce the cyclically-adjusted current budget deficit "once the economy emerges from the downturn," ultimately returning to balance.
2010	• Government borrowing as a percentage of GDP to fall in each year 2010/11 to 2015/16; • Government borrowing to halve between 2009/10 and 2013/14; and • The national debt to fall as a percentage of GDP in 2015/16.
2010*	• The cyclically-adjusted current budget to be in balance or surplus at the end of a rolling, five-year forecast horizon; and • The national debt as a percentage of GDP to be falling in 2015/16.
2015*	• The cyclically-adjusted current budget to be in balance by the end of the third year of the rolling 5-year forecast period and the national debt to fall each year in 2016. • Introduction of a welfare cap, limiting the amount that government can spend on certain social security benefits and tax credits set. The level of the cap is set by the Treasury at the start of each parliament and the Office of Budget Responsibility would report on whether the cap has been met or not.
2015*	• The national debt as a percentage of GDP to be falling in every year. • The budget (public sector net borrowing) to be in balance by 2019/20. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by the Treasury.
2016*	• Reduce cyclically-adjusted deficit to less than 2% of GDP by 2020/21. • The national debt as a percentage of GDP to be falling in 2020/21. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by the Treasury.
2020+	• The current budget to be in balance by no later than the third year of the forecast period. • Public sector investment to average no more than 3 percent of GDP on average over the forecast; and • If debt interest payments exceed 6 percent of revenue, the Government will reassess its fiscal plans. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by the Treasury.
2021	• The public sector net debt (excluding the Bank of England) as a percentage of GDP should be falling by the third year of the rolling forecast period. • The current budget should be balanced by the third year of the rolling forecast period. • The public sector net investment should not exceed 3 percent of GDP on average over the rolling forecast period. • Welfare cap: expenditure on welfare will be contained within a predetermined cap and margin set by the Treasury.
*****Represents an update to the Charter for Budget Responsibility. +These rules were announced in the 2019 Conservative Party manifesto and adopted at the Spring Budget 2020. However they were never formally adopted in the Charter for Budget Responsibility as the fiscal framework was reviewed.	

Table 11. United Kingdom: Selected FSAP Findings Concerning the Financial Stability Framework and Related Key Recommendations*

Selected Findings	Related Recommendations
Systemic Risk Monitor and Oversight	
• Evaluating systemic risk in NBFIs remains a challenge due to the global nature of the sector and data and information gaps. • The failures of two large internationally active financial groups (Greensill and Archegos) demonstrate the challenges facing global regulators in identifying NBFI vulnerabilities. Information on activities of internationally active NBFIs collected by individual regulators is generally incomplete.	• Accelerate the efforts to close data gaps on NBFI activities, including data on all Sterling asset holdings and data needed to improve the management of liquidity demands by fund managers; continue improving flow-of-funds data including all cross border NBFI exposures (FSSA, key recommendation 13). • Strengthen information sharing with relevant third-country authorities, including reviewing the approach to monitor and supervise hybrid cross-border transactions, and internationally active mixed financial groups (FSSA, key recommendation 14).
Emerging Issues	
• The authorities are at the frontier of analyzing climate-related financial risks and aim to address them through their regulatory framework. However, banks' climate disclosures, one of the key initial steps, remain incomplete. • Financial innovations, while improving the quality and efficiency of financial services, could also bring systemic risks. Risks could grow rapidly before a particular type of services becomes systemic. • Financial firms increasingly use cloud service and other third-party services to perform core services. With limited number of service providers and lack of full technological understanding and supervisory attention, it could potentially raise systemic risks and vulnerability to cyber threats. • The complex and internationally connected financial system is exposed to high money laundering (ML) threats, particularly from foreign crimes. Despite the globally top-ranked AML/CFT regime, it faces challenges on risk-based supervision, given the vast number of entities with AML/CFT obligations. Misuse of UK corporate structures can be addressed by improving the accuracy of the beneficial ownership information contained in the People with Significant Control (PSC) Register.	• Seek additional statutory powers to review and examine the resilience of all critical services (including, but not limited to, cloud services) that third parties provide to regulated firms (FSSA, key recommendation 3). • Further develop "on the ground" reviews of systemically important financial firms, including to enhance depth and breadth of risk-based AML/CFT supervision (see FSSA, key recommendation 4). • Enhance entity transparency through improved verification of beneficial ownership information on the PSC Register and augment as needed ongoing support to Crown Dependencies and British Overseas Territories in operationalizing similar registers (FSSA, key recommendation 6).

* Please see the UK Financial System Stability Assessment for the complete list of key recommendations including the priority attached to them.

Table 12. United Kingdom: "Build Back Better: Our Plan for Growth" and the Budget

Policy Areas	Key Budget Commitments	Shortfalls
Infrastructure	• Capital spending will average 2.7 percent of GDP until 2024–25 (well above the 40 years average of 1.4 percent). • A total of £100 billion of investment in economic infrastructure up to 2024–25, including significant funding for climate change projects at Spending Review 2021, £21 billion for road infrastructure.	• 0.3 percent of GDP for public transport in regions but only about a quarter (£1.5 billion) is new commitment (according to the Green Alliance, about £7.6 billion a year in new commitments are needed). • An extra 1 percent (£21bn) a year of green investment would be needed to meet net zero target (Green Alliance). • Only £500 million for grants to install about 30,000 new home heating systems and replace boilers (Government target is for 600,000 per year by 2028).
Skills	• Core schools' budget will increase from £49.8 billion this year (about 2.2 percent of GDP) to £56.8 billion in 2024–25. • The government is investing a total over the parliament of £3.8bn in skills by 2024–25, equivalent to a cash increase of 42% (26% in real terms) compared to 2019–20.	• UK education budget will have risen 3 percent by 2025 against 2010 levels, compared with a 40 percent increase on spending for health. (*) • Funding for further education colleges will be 10 percent lower than a decade ago, and for final years of secondary education 23 percent lower. • Despite a 30 percent rise in adult education spending since 2019, combined funding for adult learning and apprenticeships will be 15 percent below 2010 levels by 2025.
Innovation	• Increase in public sector investment in R&D to £20bn a year by 2024–25, an increase of about a quarter in real terms from 2021/22. This includes: ○ An increase to core funding for UK universities and research institutions by £1.1 billion per year more by 2024–25 compared to 2021–22. ○ Significant support for business-driven innovation, with funding for core Innovate UK programmes increasing to around £1 billion per annum by 2024–25. ○ Full funding for association to Horizon Europe. ○ £800 million by 2025–26 for the new Advanced Research and Invention Agency (ARIA).	• Public resources for R&D would be only 1.1 percent of GDP in R&D by 2024, less than half the overall target of spending 2.4 percent of GDP (similar to other developed economies).

(*) Source: Zaranko, B. (2021), "Spending Review 2021: Austerity over but not undone." Institute for Fiscal Studies, October 28, 2021 (https://ifs.org.uk/uploads/Autumn-Budget-2021-Austerity-over-but-not-undone-Ben-Zaranko.pdf).

Table 13. United Kingdom: Key ALMPs Initiatives

Policy Initiative	Implementation (*)
Category: Supported Employment (^)	
• Kickstart program (for 16–24 year-olds on Universal Credit and at risk of long-term unemployment). • Announced in July 2020 as a £2bn scheme which could fund up to 250,000 6-months placements.	• Announced in July 2020 with impact in November 2020. • As of 5 December 2021, over 112,000 Kickstart jobs have been started by young people. • End of program extended from Dec. 2021 to March 2022.
Category: Labor Market Services	
• Restart Program (for long-term jobless, i.e., Universal Credit claimants who have been out of work for at least 12 months) launched in November 2020. • £2.9bn Restart scheme to give 12-month enhanced support to find jobs; worth about £2,000 per person.	• Announced in November 2020 as a £2.9bn scheme to support over 1,000,000 long-term unemployed people over 3 years. Launched in July 2021.
• £2.3bn invested across the Plan for Jobs and Spending Review 2020 to hire 13,500 work coaches, doubling the number to 27,000). • Increase the number of Job Centre Plus locations.	• Announced in July 2020. • Hired 13,500 coaches in only 8 instead of 12 months initially planned. • Over 90 new centres and 150 youth hubs.
• Job Entry Targeted Support (£200mill.) for those unemployed between 3–12 months (CV writing, interview skills, job search advice and tailored support.	• Announced in July 2020. • 176,000 job seekers have benefited of which over 30,000 were hired.
• Job Finding Support for those unemployed less than 3 months (for example, help to identify transferable skills, understand sector specific approaches, support with CV writing, and develop personalized action plans).	• Launched in July 2020, started only in January 2021. Over 43,000 beneficiaries to date. • Program extended until end of December 2021.
• Additional Funding for National Careers Service (£21bn) to provide additional information, advice and guidance on job market decisions.	• 270,000 beneficiaries targeted.
Category: Hiring Incentives	
• Promoting new time limited apprentice hiring. • £3,000 wage subsidy for new apprentices on minimum wage hired before September 2021.	• Launched in July 2020. • 162,000 apprentices hired under the scheme. • Beyond January 2022, once the incentive ends, employers who do not pay the Apprenticeship Levy will still receive government support for 95 percent of the training costs.
• Increasing the number of traineeships for 16–24-year-olds: £1,000 bonus per trainee for employers who provide work placements.	• Over 17,000 young beneficiaries as of August 2021.
Category: Training	
• Lifetime Skills Guarantee: Fully funded Level 3 courses for any adult without A level qualifications.	• Could benefit 11+ million adults without L3 qualifications. • About 15,000 expected to benefit from Skills Bootcamps this year.
• Expanding Sector-Based Work Academy Program, to support those out-of-work develop the skills they need to re-enter the job market in new sectors.	• Almost 65,000 enrolments in 2020/21, while the ambition was to create 80,000 placements during that period.
• Expanding Skills Bootcamps (12–16week courses led by employers in sectors of high labor demand).	• 16,000 to benefit this year and plan to quadruple the number of available places by 2024/25.

(^) Categories as defined by the OECD are: 1) Labor Market Services (including Counselling, Financial assistance with the cost of job search, Job brokerage and related services for employer; and Administration of benefits); 2) Training; 3) Employment Incentives; 4) Sheltered and Supported Employment and Rehabilitation; 5) Direct job creation; and 6) Start-up incentives.
(*) Based on HM Government (2021), "Plan for Jobs Final": https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1016764/Plan_for_Jobs_FINAL.pdf).

Table 14. United Kingdom: Programs on Equity Support to SMEs

Programs	Estimated Support	Options to Increase Equity Support
New Programs Providing Equity to Firms		
Future Fund: **Breakthrough** • Invests in R&D-intensive firms, co-investing up to 30% of a minimum investment round size of £30m. • Delivered by British Patient Capital (BPC), a commercial subsidiary of the British Business Bank.	£375m, 0.02% of GDP	Consider equity support to a broader group of SMEs, like already-closed Future Fund and with a larger envelope.
Other programs: • Life Sciences Investment Program (£200m, 0.01% of GDP) • British Patient Capital Core Program (£1.3bn, 0.06% of GDP) • British Business Bank's (BBB) Regional Funds (£0.3bn, 0.01% of GDP, and £1bn, 0.04% of GDP expected for next 5 years)		
Existing British Business Bank Programs Providing Equity to Firms		
• Future Fund (£1.14bn, 0.5% of GDP, has closed) • Angel Co-Investment Fund (Angel CoFund) (£100m, 0.004% of GDP) • Regional Angels Program (£250m, 0.01% of GDP) • Enterprise Capital Funds (£100m per year, 0.004% of GDP) • Managed Funds (£500m, 0.02% of GDP) • National Security Strategic Investment Fund (NSSIF) (£190m, 0.01% of GDP)		
Programs Provide "Equity-Like" Support to Firms		
A Temporary Business Rates Relief • £1.7bn (0.07% of GDP) • Freeze the business rate multiplier for all businesses, a 50 percent business rate cut, with a cap of £110,000 per business, for businesses in retail, hospitality, and leisure sectors. • Delivered through tax payments. • By Apr 2023	£1.7bn, about 0.2% of total turnovers of eligible sectors	Attached to business' turnovers.
Pay as You Grow (PAYG) Options to Bounce Back Loans (BBL) • £46bn (2% of GDP) of total BBL disbursements • All BBL borrowers could apply for one, or any combination of the three options: i) extension of maturity from 6 to 10 years; ii) only paying interest for 6 months (up to three times); and iii) taking a repayment holiday for 6 months.	£0.5bn, about 1% total business turnovers[1]	Consider additional options after PAYG options or similar options are exhausted:[2] i) converting to no-voting equity for a period of time, and then selling back or converting back to loans; and ii) converting to future tax liabilities with a pre-agreed time horizon and tax rate (by HMRC).
Repayment Schedule for Deferred VAT • Total amount: £33.5bn (1.4% of GDP) • Taxpayers could pay deferred VAT in equal installments (from 2 to 11 months), interest free (standard offer through online application) or seek extra help to pay by contacting HMRC. • Extra help to pay authorized by HMRC.	£0.5bn, about 1% total business turnovers[3]	Businesses can seek further support through 'help to pay' from HMRC, with some viability assessment.

[1] The calculation is based on the total £46b BBL disbursement, 2.5% interest rate, and 3% discount rate and assumes all three options used at the beginning of repayments.
[2] Some options may not be feasible for small and micro firms.
[3] The calculation assumes that all deferred VAT is paid with 11 equal installments. The net present value is calculated based on 3 percent discount rate.

Table 15. United Kingdom: Anti-Corruption Efforts (Authorities' Self-Assessment)
Corporate Transparency
The UK concluded three detailed public consultations on corporate transparency and register reform in 2021 in preparation for legislation in this area.
The Spending Review of October 2021 includes £63 million of further investment in upgrading Companies House systems, and Companies House has stepped up their work with law enforcement in a major way in recent years.
On September 1, 2021, the UK formally joined the Beneficial Ownership Leadership Group and signed up to the best practice beneficial ownership disclosure principles.
OECD Working Group Recommendations to Strengthen the Effectiveness of Enforcement
The UK reported its progress on implementing outstanding recommendations from its Phase 4 Evaluation by the OECD Working Group on Bribery in June 2021. The UK has fully or partially implemented 37 out of its 44 recommendations overall.
Several recommendations have now been declared fully implemented: i) improve detection of foreign bribery in the UK's tax system and inter-agency cooperation with HMRC, ii) provide further training for public procurement professionals on debarment, iii) improve procedures around international cooperation for foreign bribery, iv) raise awareness of Article 5 of the Anti-Bribery Convention (prosecutorial independence), v) undertake a review of UK Export Finance's compliance policies and procedures.
One recommendation was upgraded to partially implemented: ensure that Article 5* is clearly binding on prosecutors and investigators.
The UK's efforts to implement recommendations on the extension and implementation of the Anti-Bribery Convention to Crown Dependencies and Overseas Territories (CDs and OTs) are on-going.
International Anti-Corruption
The UK established a technical assistance unit in February 2021, aimed supporting low- and middle-income countries to tackle corruption and illicit finance through capacity building, in line with international standards.
In April 2021 the UK launched its Global Anti-Corruption sanctions regime, which provides a tool to impose asset freezes and travel bans on individuals and entities involved in serious corruption around the world.
Under the UK's G7 presidency a comprehensive statement on tackling corruption was included in the Interior and Security Ministers' Communique. G7 members made commitments on: enhancing transparency and collaboration in corruption investigations, including asset recovery; leading good practice on real estate transparency and open and transparent procurement; and a stronger, more unified G7 voice in global anti-corruption standards.
The UK Government published a comprehensive update highlighting the actions taken in the 3rd year of the UK anti-corruption strategy in December 2021.
*Article 5 (Enforcement) states that investigation and prosecution of the bribery of a foreign public official shall be subject to the applicable rules and principles of each Party. They shall not be influenced by considerations of national economic interest, the potential effect upon relations with another State or the identity of the natural or legal persons involved.

Annex I. Post-Covid Scarring in the UK

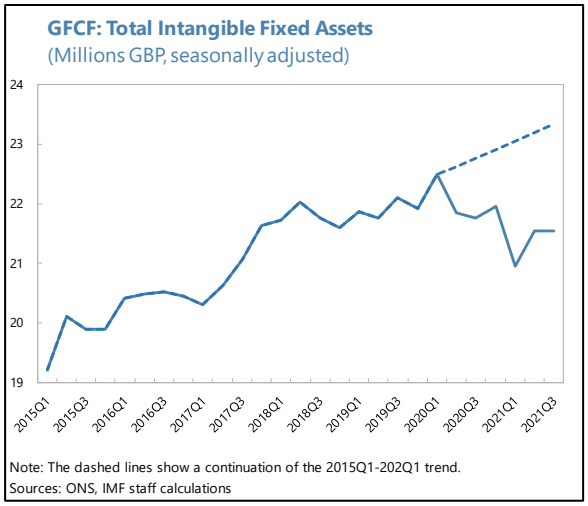
1. In the medium term, potential output can be decomposed into production factors as follows:

$$Y = F(A,R,K,L) * E = A * \frac{R^{sr}K^{sk}L^{sl}}{H} * POP * PART * (1-u) * \frac{H}{N} * E$$

where A is total factor productivity (TFP), R, K, L are respectively intangible, tangible and human capital, H is labor hours, POP is population, $PART$ is the labor participation rate, u is the natural unemployment rate, H/N represents hours per worker and E denotes allocative efficiency.[1]

2. Scarring may arise through several channels, some of which appear more pertinent for the UK:

- **Capital**: Physical capital and intangible assets have seen a period of reduced investment during the sharp economic downturn in 2020, and as a result of uncertainty about the post-Covid and post-Brexit structure of the economy. Moreover, depreciation rates of both tangible and intangible capital may rise in the aftermath of the pandemic as some pandemic-era investments eventually become obsolete (e.g., contact tracing software).



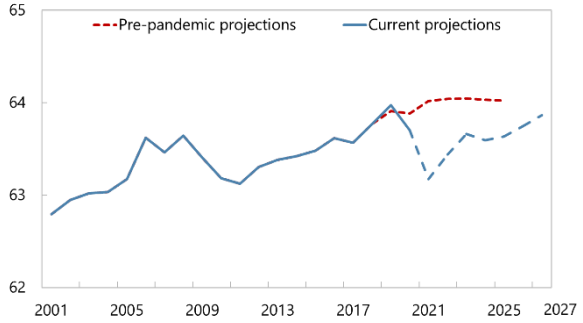
Note: The dashed lines show a continuation of the 2015Q1-202Q1 trend.
Sources: ONS, IMF staff calculations

- **Labor supply**: The pandemic and Brexit have been associated with reduced net migration. To a lesser degree, the pandemic has also impacted the labor force through increased mortality. Inactivity rates also increased sharply during the 2020 economic downturn, especially among workers aged 16 to 24 and 50 and above. Inactivity among the younger cohorts was likely driven by a shift to further education in response to adverse economic conditions and has reversed in 2021. The decrease in participation of older cohorts is likely related to early retirement and expected to linger, keeping overall labor participation below the pre-pandemic trends for some time. Unemployment and hours per worker are not expected to be affected much in the medium term, given the shortfall in labor supply, as the furlough scheme has contained structural damage from the pandemic, and as sectoral and occupational mismatches generated by the pandemic were short-lived.[2] While staff forecast a temporary rise in unemployment as growth slows down towards its medium-term trend over 2023–24, labor market policies are expected to minimize consequent mismatches and structural unemployment.

[1] See Haskel (2021) for further details.

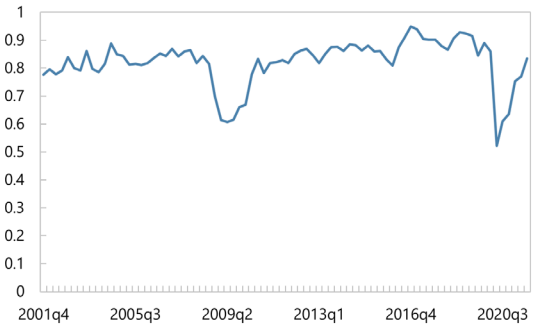
[2] See Pizzinelli and Shibata (2022) for empirical evidence on this.

Labor Participation Rate
(Percent)



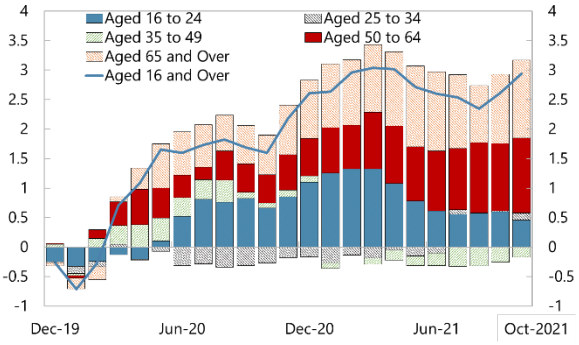
Note: Dashed lines represent staff projections. Pre-pandemic projections are as of January 2020.
Sources: Haver Analytics and IMF staff calculations.

Correlation of Vacancy and Unemployment Shares



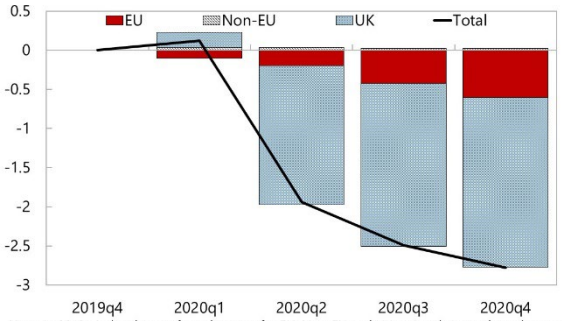
Note: The figure plots the correlation between vacancy and unemployment shares across 18 industries. Lower corelation values indicate a higher degree of mismatch.
Sources: ONS, UK LFS, and Pizzinelli and Shibata (2022).

Economic Inactivity Decomposition by Age Group
(Percent change relative to 2019Q4 Average)



Sources: ONS and Haver Analytics.

Breakdown of Employment by Nationality
(Percent change from 2019Q4)



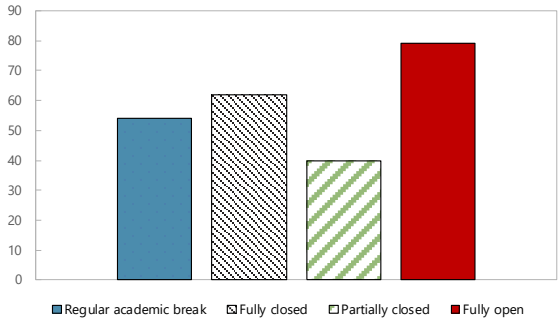
Note: In 2019q4, the shares of employment for EU, Non-EU and UK nationals in total employment were 8 percent, 7 percent and 85 percent respectively.
Source: HMRC Pay As You Earn Real Time Information.

- **Productivity-related factors**:

  - *Human capital:* The pandemic is expected to have a negative impact on human capital over the medium-term due to loss of schooling, foregone on-the-job-learning for furloughed and unemployed workers, and curtailed positive knowledge spillovers while working from home. Another channel of negative impact on human capital is the loss of specific talent and skills from foreign workers as a result of the decrease in net migration associated with the pandemic and Brexit.

  - *Allocative efficiency:* While Covid and Brexit entail large shocks to the structure of the economy, misallocation of factors of production is expected to have only a limited

UK: School Closures Due to COVID
(Days)



Note: Calculated based on the period between 11 March 2020 and 2 February 2021. Schools are considered fully closed when the closures affect most or all of the schoolchildren enrolled at pre-primary, primary, lower and upper secondary levels. Partial closures refer to situations in which schools are either closed in some of a country's administrative units, for some grade levels, or are operating with limited capacity. Finally, a status of fully open means that classes are held in-person for all schoolchildren and at all grade levels.
Source: UNESCO. 2020. Global monitoring of school closures caused by COVID-19. https://en.unesco.org/covid19/educationresponse

contribution to scarring in the medium-term, as the shifts in sectoral GVA shares seen in 2020 have largely reverted in 2021 and as resultant labor mismatches have been short-lived.

- *TFP:* The period of lower intangible investment during the pandemic is expected to lower aggregate TFP, including through reduced knowledge spillovers. While Covid has increased adoption of some digital technologies (e.g., remote working capabilities), and that could lead to productivity gains through more flexible organization of work, this may in part reflect mitigation of a negative TFP shock from the pandemic (as these technologies were already available before but not considered profitable to adopt).

3. The quantification of scarring is guided by staff's medium-term forecasts and historical coefficients.

- **Capital**: Scarring due to capital-related factors is estimated by comparing pre- and post-pandemic staff forecasts[3] for the physical and intangible capital stock in 2025. These forecasts are developed using the perpetual inventory method, which suggests

$$K_{t+1} = (1 - \delta_t^K)K_t + I_t^K$$

$$R_{t+1} = (1 - \delta_t^R)R_t + I_t^R$$

where post-pandemic estimates for physical and intangible capital (K_t, R_t) also capture 2020–21 actuals and (I_t^K, I_t^R) reflect staff projections for fixed and intangible investments. The depreciation rates (δ_t^K, δ_t^R) are assumed to rise to 7½ percent in 2021–23 in the post-pandemic forecasts (as opposed to about 7¼ percent pre-pandemic) in view of some pandemic-era investments becoming obsolete. Using a historical average for the capital share in income (at about 45 percent), scarring due to physical and intangible capital are estimated at 0.4 and 0.1 percent of GDP respectively.

- **Labor**: Scarring due to labor-related factors is similarly estimated by comparing pre- and post-pandemic projections for labor hours, which can be decomposed to

$$H = POP * PART * (1 - u) * \frac{H}{N}$$

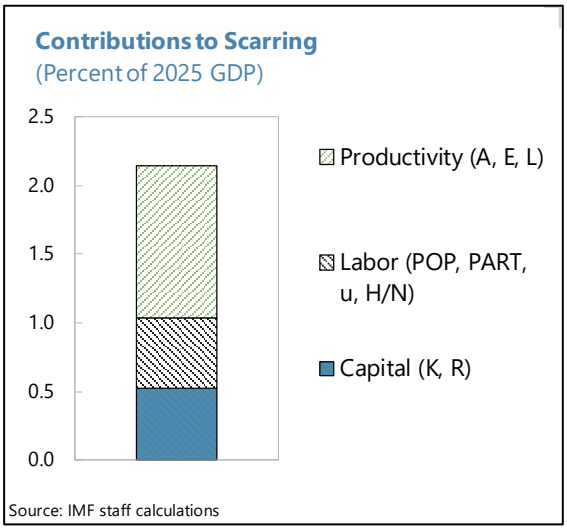
with variables defined as above. With unemployment having returned to its natural rate in 2021 and no significant change in average labor hours per worker, changes in labor hours are largely driven by labor force participation (which is projected to settle below its pre-pandemic trend as shown above) and population (which is based on ONS projections in 2018 for pre-pandemic

[3] Pre-pandemic forecasts refer to those reported in the January 2020 World Economic Outlook Update, while post-pandemic forecasts are reported in Table 6 of this staff report.

forecasts and 2020 for post-pandemic forecasts). Using a historical average for the labor share in income (at about 55 percent)[4], labor is estimated to contribute 0.5 percent of GDP to scarring.

- **Productivity-related factors**: Finally, staff estimate productivity-related factors to account for about half of total scarring consistent with empirical estimates based on past-pandemics (see e.g., April 2020 World Economic Outlook, Ch.2). This implies a scarring contribution of about 1.1 percent of GDP which is equivalent to less than half a standard deviation decrease in TFP's growth contribution over 2020–25. Of this, about 0.6 percent of GDP is estimated to be due to knowledge spillovers based on the projected decline in the intangible capital stock and a multiplier of 3.5 based on Haskel (2021).[5] Another 0.5 percent of GDP is attributed to human capital losses from foregone on-the-job-learning, consistent with the projected cumulative loss of labor hours (amounting to a quarter of a work year over 2020–25) and literature-based elasticities.[6] The remaining 0.1 percent of GDP can be explained by productivity losses arising from allocative inefficiency, with human capital losses from foregone schooling expected to materialize in the longer term.

4. Overall scarring is estimated at 2.2 percent of GDP by 2025. Taken together, physical and intangible capital contribute to a quarter of total scarring, with the aforementioned adverse effects partially offset by elevated government investment and pandemic support measures aiding private investment. Labor supply accounts for another quarter of scarring, reflecting decreased net migration and a decline in labor participation relative to its pre-pandemic trajectory (averaging 63.6 percent over 2023–25 versus 64 percent on the back of an upward trend in 2019). The remaining half of scarring is due to productivity-related factors with human capital and knowledge spillovers respectively accounting for 20–25 percent of scarring, leaving a small residual of less than 5 percent of total scarring that can be attributed to allocative inefficiency.



[4] Due to difficulties in measuring the human capital share in income, the quantification treats human capital as part of productivity and assumes that labor and capital shares sum to unity.

[5] At 0.6 percent of GDP, the estimated contribution of intangible knowledge spillovers is just below the lower bound of the range proposed by Haskel (2021).

[6] Empirical estimates indicate that an extra year's experience on the job raises wages by 1–3 percent (see e.g., Buhai et al., 2014). The elasticity of TFP to cumulative labor hours is calibrated to 2 percent, which is the midpoint of this range.

Annex II. Risk Assessment Matrix[1]

Source of Risk and Relative Likelihood	Expected Impact of Risk	Policy Recommendations
Medium **Global resurgence of the Covid-19 pandemic**. Local outbreaks lead to a global resurgence of the pandemic (possibly due to vaccine-resistant variants), which requires costly containment efforts and prompts persistent behavioral changes rendering many activities unviable.	**Medium** • Demand for contact-intensive sectors would remain weak (e.g., voluntary social distancing), prompting additional business innovations (e.g., online sales and services). • The economy would cool down and wages and prices moderate. • Labor shortages and mismatches would worsen, contributing to higher medium-term scarring.	• Use all available policy space to maintain accommodative fiscal and monetary policy, including emergency support for the most affected sectors. • Increase and better target ALMPs for the most vulnerable groups.
Medium **De-anchoring of inflation expectations in the US leads to rising core yields and risk premia**. A fast recovery in demand (supported by excess private savings and stimulus policies), combined with Covid-19-related supply constraints, leads to sustained above-target inflation readings and a de-anchoring of expectations. The Fed reacts by signaling a need to tighten earlier than expected. The resulting repositioning by market participants leads to a front-loaded tightening of financial conditions and higher risk premia, including for credit, equities, and emerging and frontier market currencies. **De-anchoring of inflation expectations in the UK leads to rising core yields and risk premia**. Supply-side constraints and shocks lift inflation and push medium-term expectations upwards.	**High** • The pound would likely depreciate with pass-through to already high inflation. • The BoE would need to tighten monetary policy to return inflation to target. A period of below trend output growth and potentially a recession would follow. • Highly leveraged elements of the private sector would face refinancing and solvency problems, activating macro-financial feedback channels that would deepen the recession.	• Adjust monetary policy as needed to keep inflation expectations anchored. • Provide liquidity support to the financial sector as needed. • Use available fiscal space to cushion the economy against a recession.
High **Persistent supply bottlenecks and shortages**. Logistical disruptions in global supply chains continue. Labor shortages affect entire sectors.	**High** • Supply would not catch up with demand and price pressures would be exacerbated. • The BoE would accelerate the pace of monetary tightening to keep inflation anchored to a path returning to target. • The economic recovery would slow and potentially stop with chances of a recessionary scenario increasing.	• Monetary policy should focus on the potential second-round effects and tighten if there are signs of de-anchoring of inflation expectations.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Source of Risk and Relative Likelihood	Expected Impact of Risk	Policy Recommendations
		• Implement structural policies tailored to deal with the source of bottlenecks. • Revise Brexit migration legislation to augment the labor force.
Medium **Intensified geopolitical tensions and security risks**. Geopolitical tensions in selected countries/regions cause economic/political disruption, disorderly migration, higher volatility in commodity prices (if supply is disrupted), and lower confidence, with spillovers to other countries.	**Medium** • Commodity price volatility would initially exacerbate already high price pressures, but the economy would slow given impact on trading partners and a recession would be likely. • Demand and supply mismatches would ultimately resolve sooner and price pressures would calm down. • Potential activation of macro-financial feedback loops, as markets re-price and liquidity demand rises, with pockets of vulnerabilities in SMEs and households getting exposed, with losses for financial institutions leading them to pull back on lending.	• Further fiscal stimulus should be considered. • Shift from monetary tightening to maintaining an accommodative monetary policy stance, subject to keeping inflation expectations well anchored. • Alter quantitative tightening plans as needed to ensure demand for reserves remains satiated.
Medium **Problems with the Brexit transition**. The EU and the UK fail to reach an understanding on the application of the Northern Ireland Protocol, and both sides engage in a trade war. Lack of equivalence decisions for financial services by the EU, and more importantly, lack of clarity about the path forward with the EU on financial services.	**High** • Significant increase in trade barriers. There could be widespread disruptions of production and services in various sectors, exacerbating ongoing supply problems and increasing prices. • Higher import tariffs and further sterling depreciation would depress households' real incomes and consumption. • Market fragmentation increases the cost of financial services and the continuing uncertainty about the adjustment path leads to a decrease in business investment and weighs on potential growth.	• Talks between both parties should continue to seek to resolve issues and find mutually beneficial solutions. • Avoid withdrawing fiscal support until the economy stabilizes. The scope for monetary stimulus will depend on the extent to which longer-run inflation expectations remain well-anchored. • Re-engage with the EU to complete the framework for cooperation on financial regulatory issues.
Medium **Problems with managing the structural shifts and transitional issues in the financial sector**, including rising intermediation by NBFIs, rapid adoption of financial innovations, switching out of Sterling LIBOR, rising green finance, and cyber-threats.	**High** • Failure to capture the potential risks on various transitional issues could lead to systemic risks and challenge financial stability.	• Maintain adequate skills and resources for systemic risk oversight, and supervision of systemically important financial firms.

Annex III. Preliminary External Sector Assessment

Overall Assessment: The external position in 2021 is preliminarily assessed to be weaker than the level implied by medium-term fundamentals and desirable policies. The CA deficit remained high in 2021, reflecting still high public borrowing to combat economic fallout from the COVID-19 crisis, only partially offset by private saving. The uncertainty around this assessment is significant, reflecting pandemic-related factors, measurement issues, the evolving impact on growth and trade and capital flows of the new EU-UK Trade and Cooperation Agreement, and continuing outstanding issues between the EU and UK on financial services. **Potential Policy Responses**: Following efforts aimed at sustaining the recovery in the near term, policies that could support the external rebalancing and bring the current account balance closer to its norm include pursuing an appropriate fiscal policy during the tightening phase of the cycle, and structural reforms to boost the United Kingdom's productivity in the tradable sectors and international competitiveness. The latter would entail supporting reallocation to fast-growing sectors by upgrading the skill base and ensuring appropriate access to financing for firms, as well as encouraging firm digitalization and innovation. These efforts are particularly important as access to the EU market becomes more restricted.						
Foreign Asset and Liability Position and Trajectory	**Background**. The NIIP is expected to marginally decline to –21.3 percent of GDP in 2021 from –21.1 percent of GDP in 2020. Valuation effects continue to offset negative CA contributions on the NIIP.[1] The composition of assets roughly matches that of liabilities (about 85 percent of GDP in FDI, 134 percent of GDP in derivatives, and about 199 percent of GDP in other investment), although portfolio investment liabilities (166 percent of GDP) exceed portfolio investment assets (130 percent of GDP). The United States, other European countries, and Japan account for about 75 percent of total UK external assets and liabilities, and external liabilities have a larger share denominated in pounds than external assets do.[2] The staff projects the NIIP to be broadly stable over the medium term, although large and volatile valuation effects make these estimates particularly uncertain. **Assessment**. Since 2000, valuation gains have offset almost half of the effect of CA flows on the IIP (largely driven by CA measurement issues and depreciation of the pound since the 2016 Brexit decision). Fluctuations in large gross stock positions could be a potential source of vulnerability (including derivatives, both gross assets and gross liabilities exceed 500 percent of GDP). However, the 2020 ESR noted that advanced economies are generally less at risk for external crises even if they feature large gross international investment positions.					
2021 (% GDP)	NIIP: –21.3	Gross Assets: 554	Debt Assets: 256	Gross Liab.: 577	Debt Liab.: 319	
Current Account	**Background**. The CA deficit is expected to decline to 3.4 percent of GDP in 2021 (from 2.6 percent in 2020). The lower trade balance due to strong domestic demand is partially offset by a higher income balance. Gross investment increases while gross saving decreases marginally. At the same time, private saving declines more than public borrowing. **Assessment**. The EBA CA model estimates a norm of –0.5 percent of GDP and a CA gap of –3.1 percent of GDP. However, adjustments to the EBA estimates are warranted to account for the decline in net imports of travel services including tourism during the pandemic (–0.6 percent of GDP), an increase in imports due to shifts in the composition of household consumption (0.2 percent of GDP), imports of medical goods (0.01 percent of GDP), and stockpiling before Brexit (–0.1 percent of GDP), which likely affected the CA temporarily and may not be adequately captured in the cyclical components of the CA.[3] In addition, the unrecorded impact of inflation differentials (0.8 percent of GDP) and retained earnings bias on portfolio equity assets (0.1 percent of GDP) also contribute to an underestimation of the underlying CA.[4] Overall, the IMF staff assesses the CA gap in the range of –0.6 to –4.6 percent of GDP, with a midpoint of –2.6 percent of GDP. This range takes into account the uncertainty in the assessment related to the post-Brexit developments in UK-EU trade flows and financial services and possible measurement issues.					
2021 (% GDP)	CA: –3.4	Cycl. Adj. CA: –3.6	EBA Norm: –0.6	EBA Gap: –3.1	COVID-19 Adj.: –0.4	Other Adj.: 0.9	Staff Gap: –2.6
Real Exchange Rate	**Background**. The pound appreciated in real effective terms in 2021 by 3.8 percent relative to its average level in 2020, driven entirely by the nominal appreciation of the pound, but has depreciated since mid-2016 by about 3.4 percent. This depreciation reflects an unwinding of past overvaluation as well as market expectations of more restricted access to the EU market under post-Brexit trade arrangements. **Assessment**. The IMF staff CA gap implies a REER gap of 10.8 percent in 2021 (applying an estimated elasticity of 0.24). EBA REER level and index approaches suggest a gap of 2.6 and –6.5 percent, respectively, for 2021. Considering all estimates, the uncertainties around them, on average, the IMF staff assesses the REER to be overvalued between 2.5 and 17.5 percent, with a midpoint of 10 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background**. Given the United Kingdom's role as an international financial center, portfolio investment and other investment are the key components of the financial account. In net terms, the CA was financed in 2021 by net portfolio investment of 5.4 percent of GDP, while other investment and net FDI declined by 0.7 and 1 percent of GDP, respectively. Access to finance has remained favorable during the COVID-19 crisis, aided by the Bank of England's support to the financial sector. **Assessment**. Large fluctuations in capital flows are inherent to countries with a large financial sector. This volatility is a potential source of vulnerability, although it is mitigated by sound financial regulation and supervision and a strong financial sector. An additional risk is that FDI and portfolio investment inflows may decelerate, driven by the change in the trade relationship with the European Union and shift of some financial services to the European Union.						

FX Intervention and Reserves Level	**Background**. The pound has the status of a global reserve currency. The share of global reserves in sterling has not changed materially since 2015, at about 4.5 percent. **Assessment**. Reserves held by the United Kingdom are typically low relative to standard metrics, and the currency is free floating.

[1] The official NIIP data may understate the true position—estimates of FDI stocks at market values imply a much higher NIIP. Market value estimates of FDI assets assume their valuations move in line with those of equity market indices in the United Kingdom and abroad. These estimates are highly uncertain, as actual FDI market values could evolve differently across different equity markets.

[2] Estimates in Bénétrix and others (2019) suggest that, in 2017, about 90 percent of external assets were denominated in foreign currency compared with 60 percent for external liabilities.

[3] The stockpiling before Brexit (-0.1 percent of GDP) represents a drawdown with respect to the 0.1 percent accumulation described for the 2020 external sector assessment.

[4] Total Covid-related adjustment includes adjustors on tourism, compositional change of consumption, and medical goods imports.

Annex IV. External Debt Sustainability Analysis

The external debt sustainability analysis complements the External Sector Assessment (Annex II). Under the baseline scenario, external debt is projected to decline from the recent peak of 337 percent of GDP in 2020—on account of the contraction in nominal GDP during the Covid crisis—to about 279 percent over the medium term. In historical scenarios, including the Covid crisis, external debt would increase insignificantly. In addition, with more than ¼ of external debt denominated in foreign currency, a real depreciation would also lead to a sizable increase of external debt. Still, a net asset position in foreign currency suggests that external debt is sustainable. Structural reforms to increase productivity and preservation of the strong policy frameworks would help contain any external vulnerabilities as the country continues to adjust to the post-Brexit trade regime.

1. Background. External debt peaked at 337 percent of GDP in 2020, mainly due to denominator effects as the pandemic and Brexit depressed nominal GDP. Before the pandemic, external debt had stayed at around 300 percent of GDP since 2013. Almost half of external debt comprises short-term bank liabilities, while public debt accounts for a tenth. Despite the sizable external debt, the net international investment position has consistently stayed above -30 percent of GDP over the past decades, as positive valuation gains have tended to offset financial account deficits.

2. Assessment. In the baseline, external debt is projected to gradually decline to its pre-pandemic level of about 279 percent of GDP by 2026, as the economic recovery and non-interest current account induce positive dynamics. The historical scenario has the most significant impact, with debt climbing to 341 percent of GDP by the end of the forecast horizon. This scenario is based on an average of the past ten years, including a significant growth shock during the Covid crisis and a sizeable pound depreciation. Similarly, in the growth shock scenario, one of the standardized shocks (calibrated to ½ standard deviation for interest rates, growth, and the current account), external debt would rise to 306 percent of GDP. A depreciation shock has a larger impact, leaving external debt somewhat higher at 326 percent of GDP. Yet, gross debt assets at about 300 percent of GDP and a net assets position in foreign currency would offer some insurance against such shock. Although external debt is sustainable in the baseline, short-term liability positions at twice the value of GDP make the UK sensitive to market sentiment. Upholding robust policy frameworks and implementing appropriate structural reforms would be vital to preserving sustainability going forward.

Table 1. United Kingdom: External Debt Sustainability Framework, 2016–26

(Percent of GDP, unless otherwise indicated)

	Actual							Projections						
	2016	2017	2018	2019	2020			2021	2022	2023	2024	2025	2026	Debt-stabilizing non-interest current account 6/
Baseline: External debt	305	309	305	298	337			**317**	**294**	**286**	**283**	**281**	**279**	**-5.6**
Change in external debt	18.7	3.2	-3.8	-6.5	38.6			-19.9	-23.4	-7.8	-2.2	-2.9	-1.3	
Identified external debt-creating flows (4+8+9)	-1.3	-4.3	-10.1	-6.4	11.1			-16.7	-9.0	-2.4	0.2	-0.8	-0.3	
Current account deficit, excluding interest payments	0.7	-1.4	-1.7	-3.2	-1.5			-2.3	-1.1	-1.3	-1.4	-1.3	-1.3	
Deficit in balance of goods and services	1.6	1.3	1.3	0.9	-0.1			1.1	2.4	2.1	1.9	2.0	1.9	
Exports	28.2	30.0	30.5	31.0	28.1			26.4	25.8	27.3	27.8	28.1	28.3	
Imports	29.9	31.3	31.8	31.9	28.0			27.4	28.2	29.4	29.7	30.1	30.2	
Net non-debt creating capital inflows (negative)	-5.3	-1.8	-0.3	-1.6	-5.4			0.9	-0.2	-0.4	-0.4	-0.6	-0.3	
Automatic debt dynamics 1/	3.3	-1.2	-8.0	-1.7	18.0			-15.3	-7.7	-0.8	2.0	1.1	1.3	
Contribution from nominal interest rate	4.6	5.0	5.6	5.8	4.1			5.7	5.7	5.6	5.4	5.3	5.3	
Contribution from real GDP growth	-7.0	-6.6	-4.7	-5.1	29.2			-21.0	-13.5	-6.4	-3.4	-4.2	-4.0	
Contribution from price and exchange rate changes 2/	5.7	0.4	-8.9	-2.4	-15.4			...	...	...	...	...	...	
Residual, incl. change in gross foreign assets (2-3) 3/	20.0	7.5	6.4	-0.1	27.4			-3.2	-14.5	-5.4	-2.4	-2.1	-1.0	
External debt-to-exports ratio (in percent)	1083	1027	1000	962	1198			1202	1138	1047	1019	999	986	
Gross external financing need (in billions of US dollars) 4/	5886	5848	5912	6302	6056			6615	7240	7343	7656	8021	8351	
in percent of GDP	215	216	204	219	219	10-Year	10-Year	206	206	195	192	192	190	
Scenario with key variables at their historical averages 5/								**317**	**313**	**319**	**327**	**333**	**341**	**2.0**
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation							
Real GDP growth (in percent)	2.3	2.1	1.7	1.7	-9.4	0.9	3.6	7.2	4.7	2.3	1.3	1.6	1.5	
GDP deflator in US dollars (change in percent)	-9.6	-3.2	5.8	-2.5	5.8	0.4	5.8	8.4	4.5	4.8	4.4	3.5	3.4	
Nominal external interest rate (in percent)	1.5	1.6	2.0	1.9	1.3	1.7	0.3	2.0	2.0	2.0	2.0	2.0	2.0	
Growth of exports (US dollar terms, in percent)	-4.1	5.2	9.2	0.8	-13.0	1.3	8.5	9.1	6.9	13.4	7.8	6.0	5.9	
Growth of imports (US dollar terms, in percent)	-4.0	3.6	9.2	-0.5	-15.9	0.6	8.5	14.0	12.3	11.7	6.9	6.4	5.6	
Current account balance, excluding interest payments	-0.7	1.4	1.7	3.2	1.5	1.6	1.9	2.3	1.1	1.3	1.4	1.3	1.3	
Net non-debt creating capital inflows	5.3	1.8	0.3	1.6	5.4	2.9	2.9	-0.9	0.2	0.4	0.4	0.6	0.3	

1/ Derived as [r - g - r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock. r increases with an appreciating domestic currency (e > 0) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

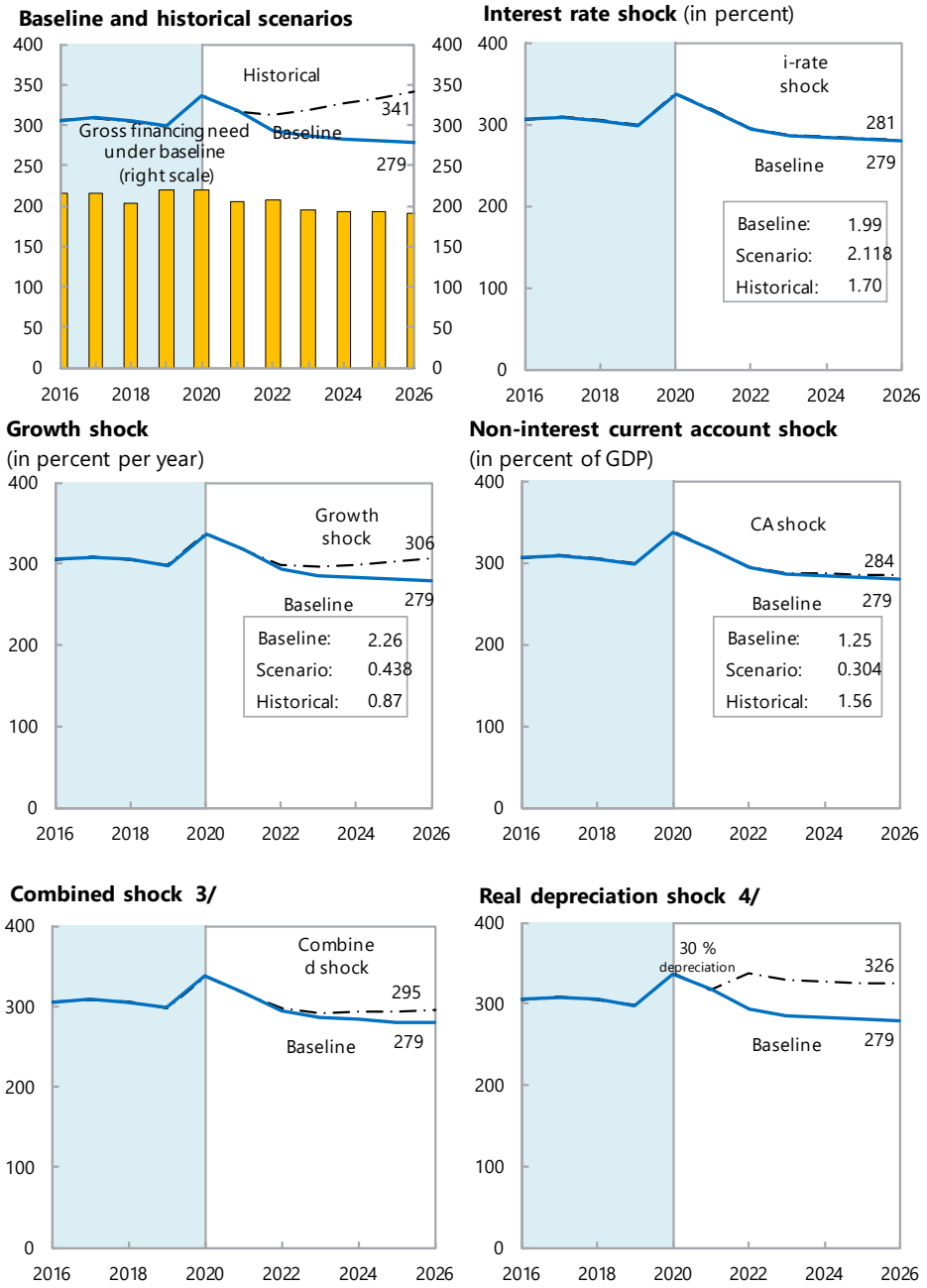
4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Figure 1. United Kingdom: External Debt Sustainability—Bound Tests 1/ 2/

(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown. The average maturity of long-term external debt is assumed to equal 7 years.

2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.

3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

4/ One-time real depreciation of 30 percent occurs in 2021.

Annex V. Debt Sustainability Analysis[1]

As the UK economy rebounded from the pandemic shock in 2021, the fiscal deficit remained high but public debt stabilized. Under the baseline scenario, public debt declines gradually as the economic recovery continues and the fiscal support measures are unwound, though still remaining slightly above the pre-pandemic level in 2027 (at 90 percent of GDP). Following a surge in 2020, gross financing needs have declined to a manageable level at 16 percent of GDP in 2021 and are projected to further decline and converge to pre-pandemic norms (at 9 percent of GDP) as the fiscal deficit declines. While quantitative tightening by the BoE is expected to increase the supply of gilts, domestic banks appear to have sufficient residual absorption capacity (i.e., once likely NBFI demand is accounted for). The projected downward path of public debt is contingent on sustained fiscal restraint and moderately sensitive to macroeconomic shocks simulated in the template.

A. Baseline and Realism of Projections

1. **Baseline fiscal assumptions**. The staff's baseline is built on the medium-term fiscal framework contained in the October 2021 budget, which entails a sharp cyclical decline in the primary deficit in FY22 and sustained structural restraint thereafter curtailing the primary deficit to less than 1 percent of GDP in FY24–27.

2. **Debt level**. The DSA utilizes a measure of gross public sector debt. For the UK this is a broad definition, incorporating sizeable elements not in general government debt, such as government guaranteed debt incurred through the BoE's Term Financing Scheme. Under the baseline scenario, gross public sector debt is projected to decline to 106 percent of GDP in 2022 and continue declining thereafter, reaching 90 percent of GDP in 2027. The main contributors to the decline in debt are the end of BoE's TFS in 2024–25 and strong r - g dynamics (in turn due to the long maturity of the UK's debt, such that the average real interest rate responds very slowly to market changes).

3. **Fiscal balance and adjustment**. In the baseline projection, a large improvement in the budget deficit takes place in FY22 as the economy rebounds, but the deficit remains at historically high levels due to continuation of pandemic-related spending. The deficit declines in the following years, as growth remains above potential and structural consolidation measures take hold beginning in FY23. The distribution of fiscal adjustment episodes provided in the DSA template (Figure 3) indicates the projected 3-year adjustment in the cyclically-adjusted primary balance to be about 10 percent of GDP. While appearing unprecedented, the figure is distorted by the large additional "cyclical" Covid-related spending and revenue declines, which have largely sunset due to the recovery of the economy. The adjustment which is imposed on the economy is better approximated by the structural adjustment in FY23–FY25, which at about 2 percent of GDP is well within the range

[1] The data are presented on fiscal year basis (April–March) with ratios calculated using fiscal year GDP (not centered-fiscal year GDP). Public sector gross debt is defined as net debt plus liquid assets held by general government and non-financial public corporations.

of past experience. In the same vein, the 3-year average level of the CAPB places the UK near the center of the distribution for comparator countries.

4. Realism of baseline assumptions. The median forecast errors for key assumptions (real GDP growth, the primary balance and inflation) are mostly within the error band observed for all countries (Figure 3).[2] There has been generally a modest upward bias in the projections.

5. Heatmap and debt profile vulnerabilities. Risks from the debt level are deemed high by DSA standards, as the level of debt exceeds the benchmark of 85 percent of GDP for advanced economies under the baseline and stress scenarios (Figure 5). Gross financing needs remain well below the benchmark of 20 percent of GDP under the baseline projection but rise to 23 percent of GDP under a contingent liability shock. However, financing risk assessments are further complicated by expected quantitative tightening by the Bank of England on the one hand, and the significant absorption capacity of NBFIs and residual capacity of domestic banks (given relatively low levels of exposure to the government) (see section D). Debt profile vulnerability indicators are below early warning thresholds, and interest rates and CDS spreads suggest that markets view debt vulnerabilities as low.

B. Stochastic Simulations

6. The fan charts illustrate the possible evolution of the debt ratio over the medium term, under symmetric and asymmetric distributions of risk based on historical outturns. Under both distributions there is a high level of certainty that debt will remain close to or below FY21 levels in the medium term, with some tail risks to the upside. The decline in debt of about 7½ percent of GDP in FY24 and FY25 is the result of the unwinding of the BoE's Term Funding Scheme.

C. Stress Tests

7. The DSA suggests that medium-term debt dynamics are moderately sensitive to the macroeconomic shocks simulated by the DSA template.

- **Growth shock**. In this scenario, real output growth rates are lowered by one standard deviation in FY23 and FY24. The cumulative growth shock is 10 percent of GDP (since the deep recession in 2020 informs the calculation) with debt and gross financing needs peaking respectively at 123 and 18 percent of GDP in 2024.

- **Primary balance shock**. This scenario assumes that the government provides additional stimulus to support the economic recovery. In particular, the fiscal deficit is assumed to be one standard deviation higher than in the baseline in FY23 and FY24 (amounting to a cumulative 6 percent of GDP). Under these assumptions, debt and gross financing needs peak respectively

[2] The year 2020 is excluded from the comparison due to the exceptional nature of the pandemic.

at 110 and 15 percent of GDP in 2023. The debt-to-GDP ratio follows a downward trajectory thereafter but remains 5 percent of GDP higher than the baseline in 2027.

- **Interest rate shock**. In this scenario, a 200-basis point increase in interest rates is assumed from FY23 on. The effective interest rate edges up to 1.8 percentage points by FY27 (about 0.6 percentage point higher than the baseline). Given the long maturity of the UK's debt (even accounting for the shortening impact of QE), the impact is mild.

- **Exchange rate shock**. A depreciation of 20 percent is assumed for FY23, which operates via its pass-through to inflation, as debt is denominated in local currency. Since the stock of index-linked gilts represents about 25 percent of debt, the scenario captures the sensitivity of debt payments to higher inflation (OBR Fiscal Risk Report 2017), while abstracting from the impact on other expenditures and revenues. The exchange rate shock only slightly decreases the debt ratio and does not alter its downward trajectory, as the debt impact of higher inflation-linked payments is more than offset by the denominator effect of higher nominal GDP.

- **Combined macro-fiscal scenario**. This scenario aggregates shocks to real growth, the interest rate, and the primary balance. Under these assumptions, the debt-to-GDP ratio peaks at 125 percent of GDP in FY24 and remains at 112 percent of GDP in FY27. Gross financing needs remain below the 20 percent of GDP threshold.

- **Contingent liability shock**. This scenario assumes that banking sector problems lead to a one-time bail out of the financial sector, raising non-interest public expenditure in FY23 by an amount equivalent to 3 percent of banking sector assets. The scenario can also be interpreted to cover the risk related to pandemic-related government guarantees (which amount to about 3 percent of GDP). Real GDP is also reduced by one standard deviation for two years. Under this scenario, the debt-to-GDP ratio would rise to about 128 percent of GDP in FY24 and decline thereafter, declining just below 115 percent of GDP in FY27. Gross financing needs would exceed the 20 percent of GDP threshold in FY23.

D. Additional Analysis

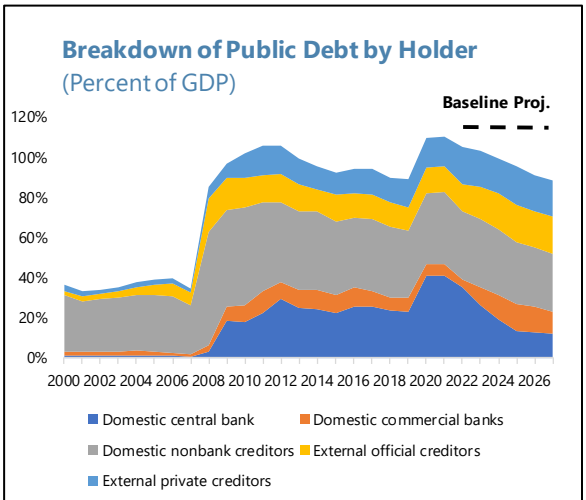
8. Staff also considered the risk of debt-related stress using the new tools developed in the Fund's new Sovereign Risk and Debt Sustainability Framework: [3]

- **The debt fan chart signals low risk (Figure 6)**. There is a high probability of debt stabilization and a narrow band of uncertainty around baseline debt projections. The asymmetric upward tilt of the fan chart is driven by realism adjustments, which are based on simple measures of the cyclically-adjusted primary balance and informed by historical GDP growth rates. These in turn

[3] See IMF (2021), Review of the Debt Sustainability Framework for Market Access Countries, IMF Policy Paper 2021/003.

might not correctly capture the sunset of pandemic-related spending and the continued rebound of the economy from the pandemic in 2022.

- **Gross financing needs present a low risk of stress**. Under a generalized stress scenario (which combines shocks presented in Figure 4 with a shortening in the maturity of newly issued government debt and a shock to rollover by foreign private creditors), gross financing needs rise to 18 percent of GDP in FY24 and decline to 13 percent of GDP at the end of the projection horizon. The needed (residual) absorption of government debt by domestic banks is further increased by quantitative tightening starting in FY22 (with the latter assumed to be in line with stated BoE QT policies).[4] Despite a projected increase in domestic banks' government debt holdings by 9 percent of their sterling-denominated assets, the GFN financeability index suggests a low level of stress owing to the current very low level of government exposure of the banking sector.



Sources: Arslanalp & Tsuda (2021); IMF staff calculations.

- **Medium-term risks of sovereign stress are low**. Combining the debt fan chart and GFN indices yields a medium-term risk index below the low-risk threshold.

E. Insurance against Shocks

9. Staff evaluated availability of debt financing under alternate paths for GDP, inflation and primary deficits to assess robustness to shocks and inform policy design (Figure 7). To do this, shocks were applied to baseline real GDP growth projections starting in 2022, with the shock impact halving each year until 2024. The range of these shocks were calibrated to match 2 standard deviations of historical 3-year growth ranges, while both demand and supply shocks were considered with differing knock-on impacts on inflation and therefore the BoE's QE/QT policies. A range of primary deficits were also considered to allow for different budgetary implications which may in part be driven by policy choices.

10. The risk assessment would rise from low to moderate under plausible adverse shocks and fiscal expansion. A sustained fiscal impulse amounting to 1 percent of GDP would raise the risk signal to moderate, even taking into account growth feedbacks, unless fiscal multipliers are calibrated at the upper bound of literature estimates (implying 1 percent of GDP fiscal impulse raises GDP growth by 2 percentage points) (Figure 7, Panel A). The risk signal would also rise to moderate if an adverse shock lowers GDP growth by 2 percentage points and/or raises the primary deficit by

[4] The QT trajectory over FY23–FY27 is consistent with estimated optimal size of the BoE balance sheet in the medium term (see Box 1).

1 percent of GDP. Risk assessments are more sensitive to adverse shocks to supply than demand, given that the former would tend to lower inflation, leading BoE to absorb a rise in gilt supply with QE, whereas the latter would raise inflation and accelerate the pace of QT. However, this sensitivity is only slight, as a rise in inflation would also raise nominal GDP with some offsetting impacts, such as reducing GFN-to-GDP ratios and, provided inflation spills over to asset prices, banks' sovereign exposure (measured as the share of gilts in bank balance sheets).

11. The risk assessment is moderate under a number of shock scenarios including a severe shock to demand (e.g., due to the emergence of a highly virulent Covid variant), a tightening of global financial conditions (e.g., due to sharper-than-expected rate hikes by the Federal Reserve and/or the ECB) which raises private and public borrowing costs and reduces GDP growth, and a recession caused by supply-side disruptions (e.g., due to supply-chain problems or a rise in commodity prices) which hit production while also leading to inflationary pressures and tighter monetary policies. In a climate change early action scenario, where steadily rising carbon prices would weigh on economic activity, the risk signal could be low or moderate depending on the fiscal impact, which would in turn hinge on carbon reduction methods (i.e., the extent of reliance on revenue-raising carbon taxes versus public investments).

Figure 1. United Kingdom: Public Sector Debt Sustainability Analysis (DSA)—Baseline Scenario

(In percent of GDP, unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

	Act. [2/] 2020	Est. 2021	Projections 2022	2023	2024	2025	2026	2027
Nominal gross public debt	110.0	110.6	106.0	105.4	102.0	97.7	93.5	90.4
Public gross financing needs	23.8	16.0	10.2	10.6	10.5	10.7	9.3	9.1
Real GDP growth (in percent)	-10.2	10.4	4.4	1.2	1.5	1.5	1.5	1.5
Inflation (GDP deflator, in percent)	6.0	0.4	6.7	2.4	2.3	2.0	2.1	2.2
Nominal GDP growth (in percent)	-4.9	11.0	11.4	3.6	3.8	3.5	3.6	3.6
Effective interest rate (in percent) [4/]	1.2	1.8	1.6	1.4	1.3	1.2	1.2	1.2

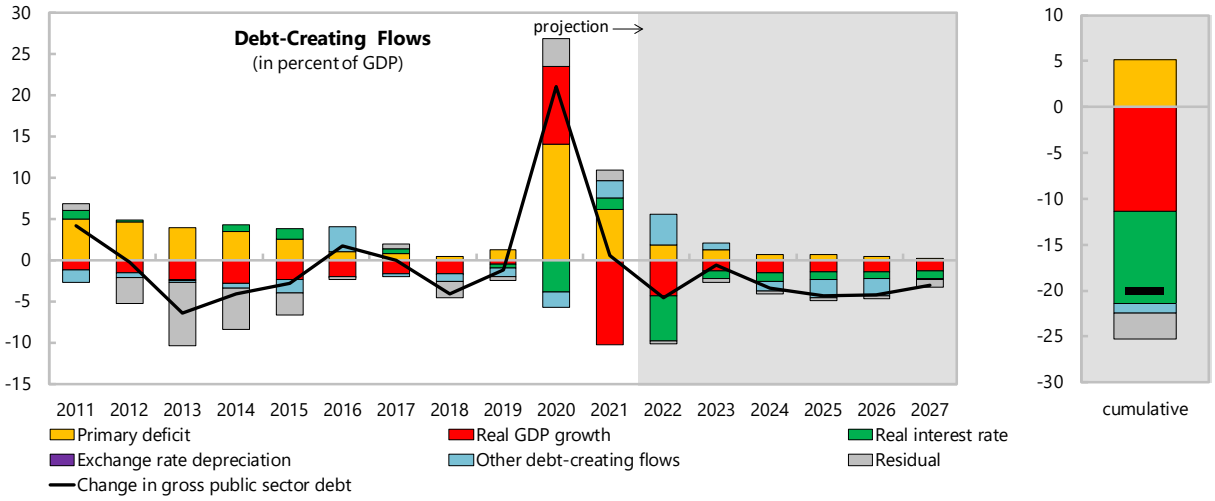
As of January 12, 2022

Sovereign Spreads	
EMBIG (bp) 3/	119
5Y CDS (bp)	10

Ratings	Foreign	Local
Moody's	Aa3	Aa3
S&Ps	AA	AA
Fitch	AA-	AA-

Contribution to Changes in Public Debt

	Act. 2020	Est. 2021	Projections 2022	2023	2024	2025	2026	2027	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	21.1	0.6	-4.6	-0.6	-3.4	-4.3	-4.2	-3.1	-20.2	
Identified debt-creating flows	17.8	-0.7	-4.2	-0.2	-3.0	-3.9	-3.8	-2.2	-17.3	
Primary (non-interest) deficit	14.1	6.2	1.9	1.2	0.7	0.6	0.5	0.2	5.1	-2.4
Primary (noninterest) revenue and grants	36.9	35.9	35.9	36.7	36.8	36.9	37.1	35.2	218.6	
Primary (noninterest) expenditure	51.0	42.1	37.8	37.9	37.5	37.5	37.6	35.3	223.7	
Automatic debt dynamics [5/]	5.6	-9.0	-9.8	-2.3	-2.6	-2.3	-2.2	-2.2	-21.4	
Interest rate/growth differential [6/]	5.6	-9.0	-9.8	-2.3	-2.6	-2.3	-2.2	-2.2	-21.4	
Of which: real interest rate	-3.9	1.3	-5.4	-1.0	-1.0	-0.8	-0.8	-0.9	-10.0	
Of which: real GDP growth	9.5	-10.3	-4.4	-1.2	-1.5	-1.5	-1.4	-1.3	-11.4	
Exchange rate depreciation [7/]	0.0	0.0	...	...	...	...	...	...	...	
Other identified debt-creating flows	-1.8	2.1	3.7	0.9	-1.1	-2.2	-2.1	-0.1	-1.0	
Cash req. adjustments. incl. privatization (negative)	-1.8	2.1	3.7	0.9	-1.1	-2.2	-2.1	-0.1	-1.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	3.3	1.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.9	-2.9	



Source: IMF staff.

1/ Public sector is defined as consolidated public sector.

2/ Based on available data.

3/ Long-term bond spread over German bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

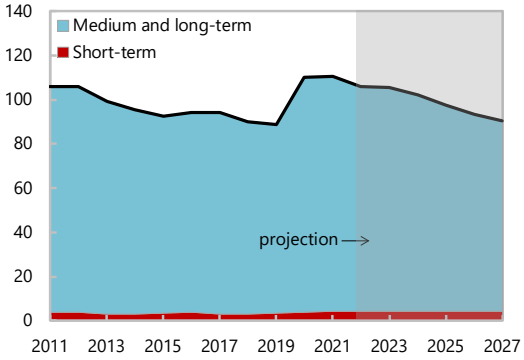
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 2. United Kingdom: Public DSA—Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

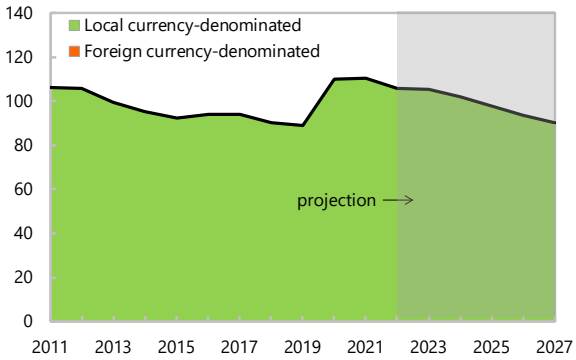
By Maturity

(in percent of GDP)

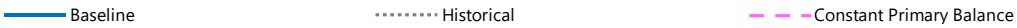


By Currency

(in percent of GDP)

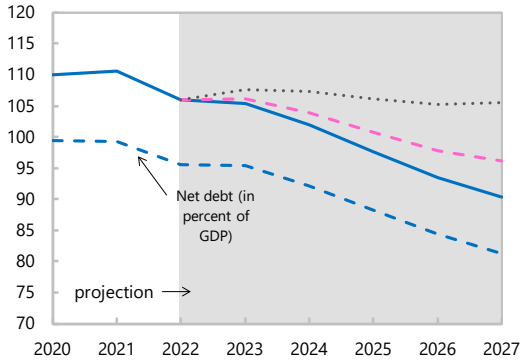


Alternative Scenarios



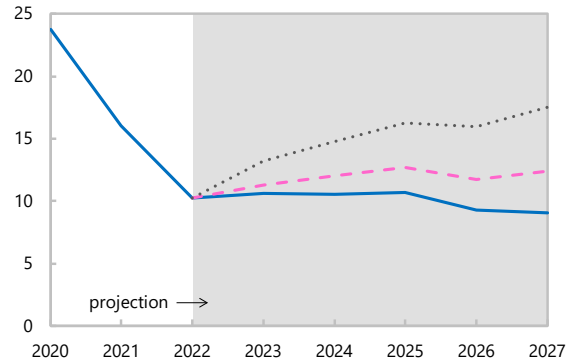
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

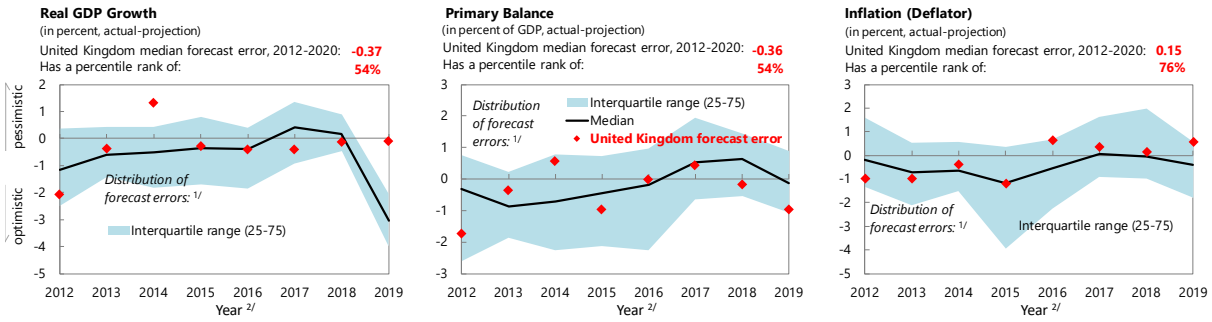
Baseline Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	4.4	1.2	1.5	1.5	1.5	1.5
Inflation	6.7	2.4	2.3	2.0	2.1	2.2
Primary Balance	-1.9	-1.2	-0.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.3	1.2	1.2	1.2
Constant Primary Balance Scenario						
Real GDP growth	4.4	1.2	1.5	1.5	1.5	1.5
Inflation	6.7	2.4	2.3	2.0	2.1	2.2
Primary Balance	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9
Effective interest rate	1.6	1.4	1.3	1.2	1.2	1.2

Historical Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	4.4	1.6	1.6	1.6	1.6	1.6
Inflation	6.7	2.4	2.3	2.0	2.1	2.2
Primary Balance	-1.9	-3.8	-3.8	-3.8	-3.8	-3.8
Effective interest rate	1.6	1.4	1.4	1.4	1.5	1.5

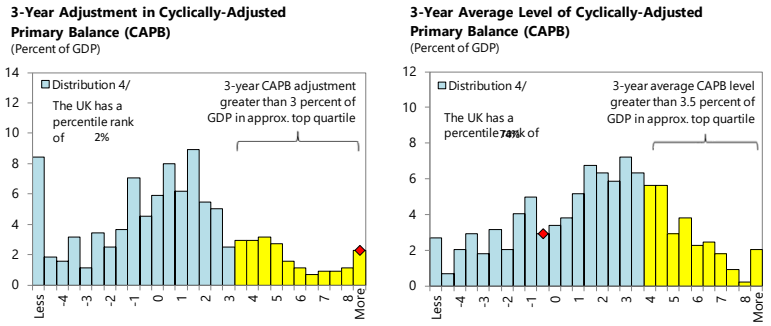
Source: IMF staff.

Figure 3. United Kingdom: Public DSA—Realism of Baseline Assumptions

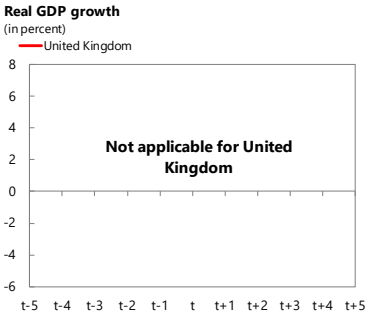
Forecast Track Record, versus surveillance countries



Assessing the Realism of Projected Fiscal Adjustment



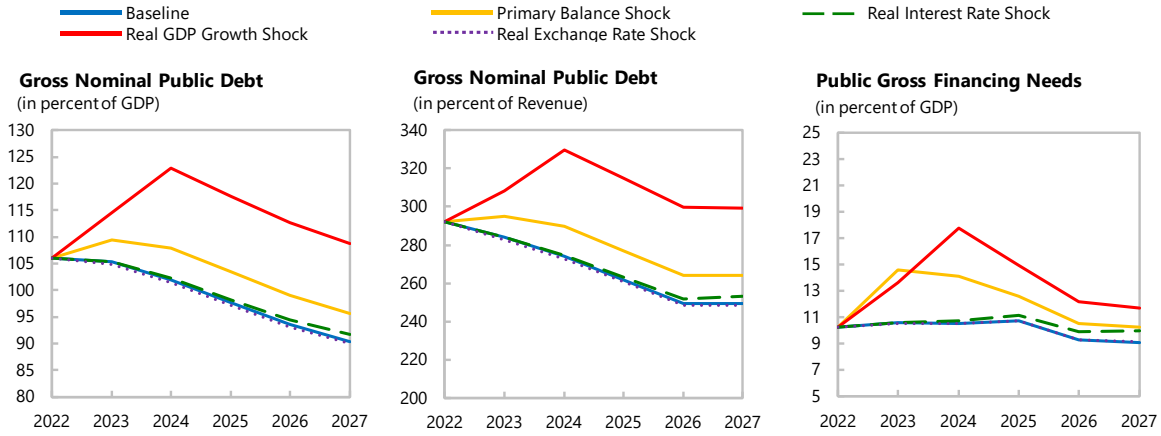
Boom-Bust Analysis 3/



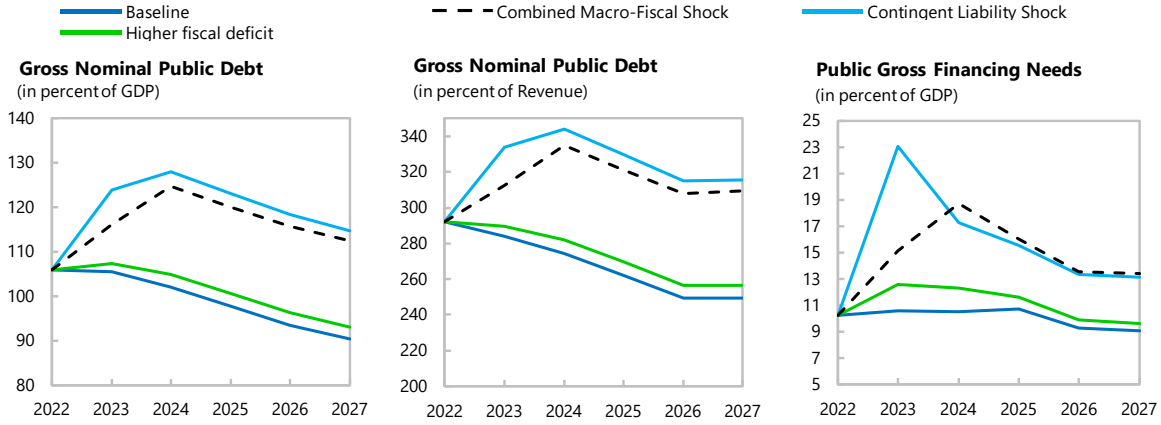
Source : IMF Staff.
1/ Plotted distribution includes surveillance countries, percentile rank refers to all countries.
2/ Projections made in the spring WEO vintage of the preceding year.
3/ Not applicable for United Kingdom, as it meets neither the positive output gap criterion nor the private credit growth criterion.
4/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Figure 4. United Kingdom: Public DSA—Stress Tests

Macro-Fiscal Stress Tests



Additional Stress Tests



Underlying Assumptions

(in percent)

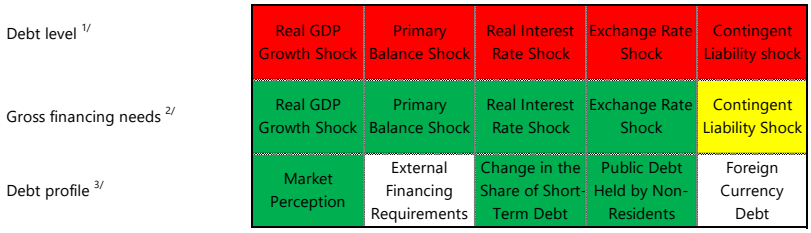
Primary Balance Shock	2022	2023	2024	2025	2026	2027
Real GDP growth	4.4	1.2	1.5	1.5	1.5	1.5
Inflation	6.7	2.4	2.3	2.0	2.1	2.2
Primary balance	-1.9	-5.2	-2.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.2	1.2	1.2	1.2
Real Interest Rate Shock						
Real GDP growth	4.4	1.2	1.5	1.5	1.5	1.5
Inflation	6.7	2.4	2.3	2.0	2.1	2.2
Primary balance	-1.9	-1.2	-0.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.5	1.5	1.7	1.8
Combined Shock						
Real GDP growth	4.4	-3.7	-3.5	1.5	1.5	1.5
Inflation	6.7	1.1	1.0	2.0	2.1	2.2
Primary balance	-1.9	-5.2	-5.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.5	1.6	1.8	1.9

Real GDP Growth Shock	2022	2023	2024	2025	2026	2027
Real GDP growth	4.4	-3.7	-3.5	1.5	1.5	1.5
Inflation	6.7	1.1	1.0	2.0	2.1	2.2
Primary balance	-1.9	-3.7	-5.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.2	1.2	1.2	1.2
Real Exchange Rate Shock						
Real GDP growth	4.4	1.2	1.5	1.5	1.5	1.5
Inflation	6.7	3.0	2.3	2.0	2.1	2.2
Primary balance	-1.9	-1.2	-0.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.3	1.3	1.3	1.3
Contingent Liability Shock						
Real GDP growth	4.4	-3.7	-3.5	1.5	1.5	1.5
Inflation	6.7	1.1	1.0	2.0	2.1	2.2
Primary balance	-1.9	-13.1	-0.7	-0.6	-0.5	-0.2
Effective interest rate	1.6	1.4	1.6	1.5	1.5	1.5

Source: IMF staff.

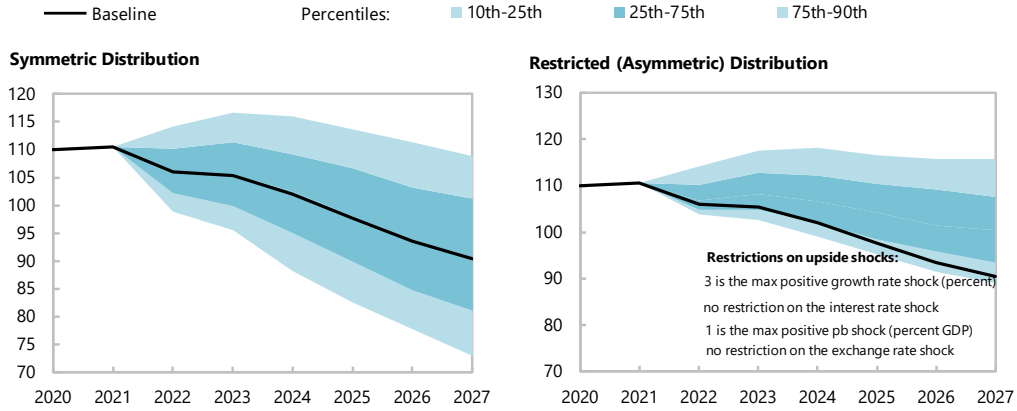
Figure 5. United Kingdom: Public DSA Risk Assessment

Heat Map



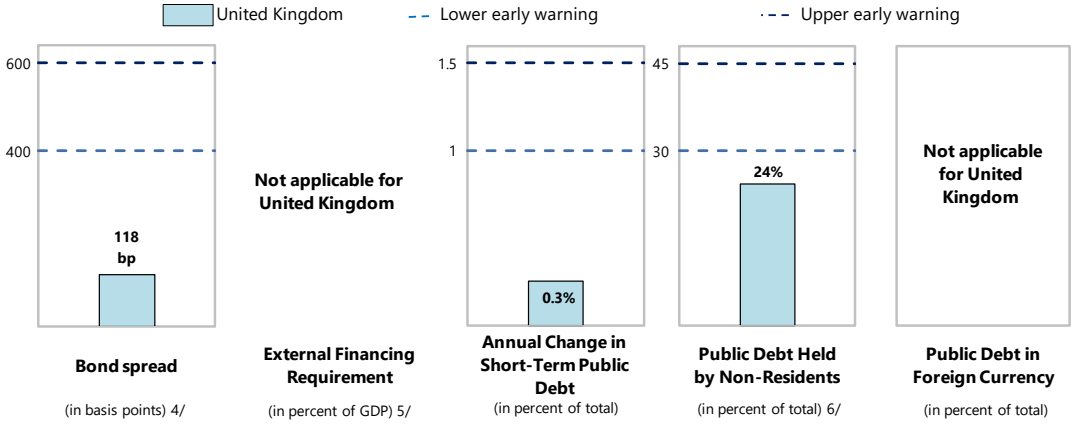
Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2021)



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 85% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 20% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.
Lower and upper risk-assessment benchmarks are:

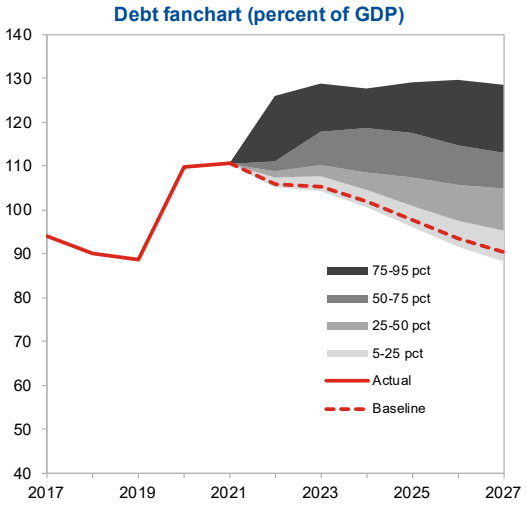
400 and 600 basis points for bond spreads; 17 and 25 percent of GDP for external financing requirement; 1 and 1.5 percent for change in the share of short-term debt; 30 and 45 percent for the public debt held by non-residents.

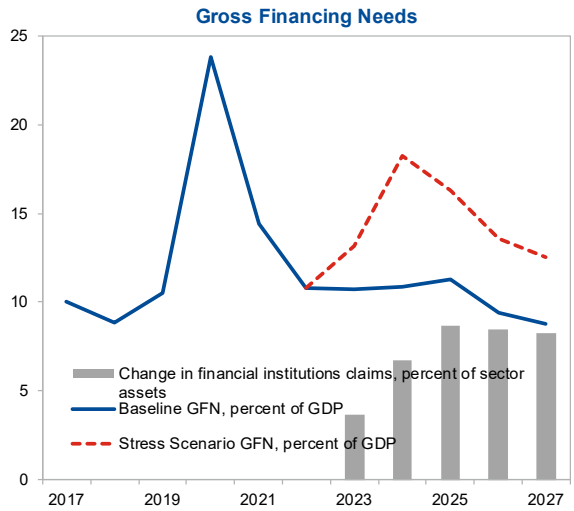
4/ Long-term bond spread over German bonds, an average over the last 3 months, 14-Oct-21 through 12-Jan-22.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

6/ Overseas holdings of gilts.

Figure 6. United Kingdom: Sovereign Risk and Debt Sustainability Framework for Market Access Countries





Debt fanchart assessment 1/

Indicator	Weight	Index
Fanchart width	0.32	1.07
Prob. of debt non-stabilization	0.33	0.01
Debt at end of proj. interacted with institutional quality	0.36	1.21
Debt fanchart index		0.77
Signal 3/	**Low risk**	
Thresholds:		
High-Moderate		2.08
Moderate-Low		1.13

Gross financing risk assessment 1/

Indicator	Weight	Index
Average GFN-to-GDP ratio in the baseline	0.34	10.31
Initial bank claims on the govt (pct of assets)	0.32	2.78
Change in bank claims on govt, stress scenario (pct of assets)	0.33	8.70
GFN financeability index		7.33
Signal 2/	**Low risk**	
Thresholds:		
High-Moderate		17.89
Moderate-Low		7.58
Memo: Sterling bank assets/GDP		197.15%

Medium-term risk assessment

Indicator	Index	Transformed Index	Signal 1/
Medium-term index		0.16	**Low risk**
Debt fanchart index	0.77	0.17	Low risk
GFN financeability index	7.33	0.14	Low risk
Thresholds:			
High-Moderate		0.40	
Moderate-Low		0.26	

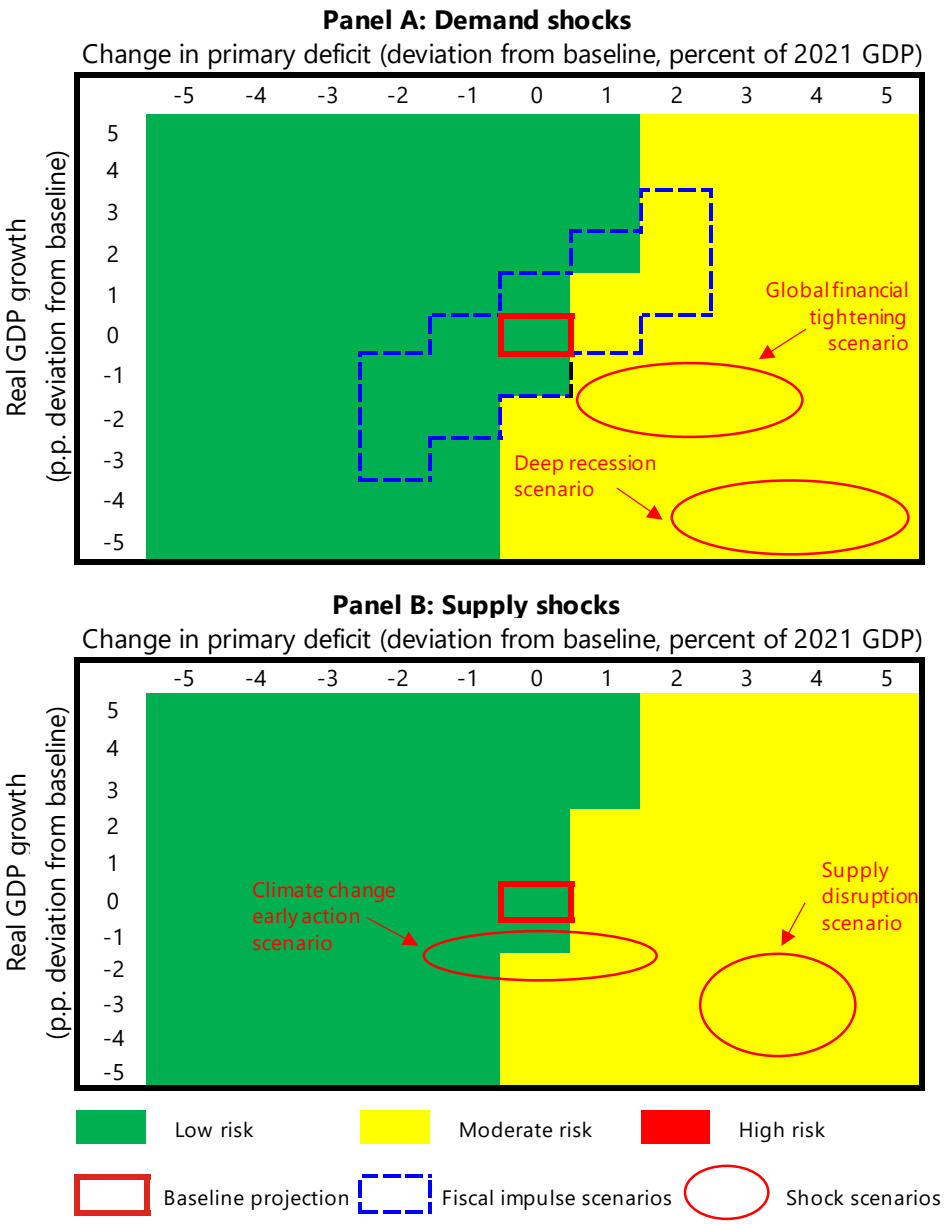
Source: Bank of England and IMF staff estimates.

1/ The debt fanchart is generated by drawing stochastic realizations of debt drivers (such as GDP growth, the primary balance, inflation and exchange rates) from their joint empirical distribution. If the baseline debt path is above the 20th percentile of the fanchart, the fanchart is centered around it. Otherwise, the fanchart is asymmetric with its central points determined by applying skewed shocks to underlying debt drivers. Institutional quality is measured using metrics from World Bank's WDI database.

2/ The change in bank claims on government in stress is computed under a scenario similar to the combined shock presented in Figure 4 combined with the primary balance shock. In addition, these shocks are augmented by imposing a temporary shortening in the maturity of new government debt issuances and a reduction in the rollover rate by foreign private creditors. The stock of BoE holdings is assumed to decline gradually in line with announced quantitative tightening and market expected increases in the bank rate. It is also assumed that non-bank financial institutions gradually increase their holdings of government debt to 10 percent of their total assets (as opposed to a 2011-19 average of 7.5 percent). Official and private external creditors are assumed to acquire new government debt in line with their average shares of non-BoE held debt between 2011-19. Domestic banks are the residual buyers of government debt after these assumptions are taken into account.

3/ The debt fanchart and GFN financeability indices are weighted averages of the indicators presented in the table. The medium-term index is an average of the debt fanchart and GFN financeability indices. For each index, a three-zone risk signal has been established after evaluating their values relative to a lower and an upper threshold, which were calibrated based on a sample of stress events in market-access countries. The lower threshold, which separates the low and moderate risk regions, corresponds to a 10 percent missed crisis rate and the upper threshold, which separates the moderate and high risk regions, corresponds to a 10 percent false alarm rate.

Figure 7. United Kingdom: GFN Risk Assessment Scenario Analysis



Source: IMF staff calculations

Note: The GFN risk assessment is conducted as described in Figure 6, but with the baseline projection adjusted according to a range of shocks to real GDP growth and the primary deficit. The vertical axis shows the impact of shocks to real GDP growth in 2022, with the impact halving each year until the shock ceases at end-2024. Changes to primary deficit are applied uniformly over 2022-24 and distributed evenly between non-interest revenues and expenditures. Changes in real GDP growth rate are assumed to pass-through to inflation with an elasticity of 0.25 under a demand shock and -0.71 under a supply shock based on the estimates of Cesa-Bianchi and Ferrero (2021). BoE is assumed to respond to 1 percent higher inflation by increasing its net gilt sales (or decreasing its net purchases) by £50bn relative to the baseline QE/QT trajectory. NBFI asset growth is assumed to stop during recessions, with NBFI gilt holdings capped slightly above the historical share of their balance sheet. The risk scenarios depicted in the red circles are loosely based on the scenarios in OBR's 2021 Fiscal Risk Report. The fiscal impulse scenarios are consistent with fiscal multipliers ranging between 0.5 and 1.5. Color coding: green = below low risk threshold, yellow = between low and high risk thresholds, red = above high

Annex VI. Steepening of the Phillips Curve in the UK

1. The Phillips curve illustrates the trade-off between maintaining price stability and achieving full capacity utilization. In its modern expectations-augmented form, it can be described with the relationship:

$$\pi_t = \alpha + \beta\hat{y}_t + \gamma E_t[\pi_{t+1}] + \delta X_t + \phi\,\hat{y}_t X_t$$

where π_t denotes inflation at time t, α is a constant term, $\hat{y}_t$ is a measure of slack in economic activity, $E_t[\pi_{t+1}]$ represents inflation expectations and the vector X_t captures structural factors that may shift the Phillips curve and/or change its slope.

2. There have been various efforts to estimate the Phillips curve. Several studies have estimated a flattening of the Phillips Curve since the 1980s, attributing it to better anchoring of inflation expectations as well as changes in structural factors, while other studies have focused on non-linearities in the Phillips curve, suggesting that its slope varies with inflation and economic slack.[1] Recent studies have also exploited regional variation within monetary unions and relied on monetary policy surprises as instruments, to refine estimates.[2] In the context of the UK, researchers have alternately suggested that the Phillips curve flattened considerably after 1980, that it has instead progressively shifted down due to a fall in NAIRU associated with trend improvements in educational attainments, and that the Phillips curve is non-linear.[3]

3. Staff developed several specifications based on recent UK and cross-country data, focusing on three structural factors that loom large for the UK post-Brexit and pandemic: **Digitalization**, which increases price flexibility through a larger role for online retail; **Inflation dispersion**, which may capture unlocking of wage and price rigidities and de-anchoring of inflation expectations as a result of repeated cost-push shocks and sectoral re-allocation and; **De-globalization**, which makes domestic economic slack more relevant for inflation and may raise labor bargaining power. Staff used monthly price-quote level data to analyze whether e-commerce penetration (i.e., digitalization) is associated with more frequent price changes; and also estimated a

[1] See e.g., Blanchard (2016) and Stock and Watson (2019) on the flattening of the Phillips curve, Nalewaik (2016) on anchoring of inflation expectations, Ball and Mazumder (2011) and Daly and Hobjin (2014) on rigidities, Aquilante et al. (2019) and Baqaee and Farhi (2021) on market power, Lombardi et al. (2020) on labor bargaining power, Auer et al. (2017) on globalization and Barnes and Olivei (2003) and Doser et al. (2017) on non-linearities.

[2] See e.g., McLeay and Tenreyro (2019) and Eser et al. (2020).

[3] See Haldane and Quah (1999), Tuckett (2018) and Speigner (2014) respectively.

sectoral Phillips curve specification using data from 10 manufacturing sub-sectors in 23 Advanced European economies over 2008–2019.[4,5]

Philips Curve Estimation Results for Φ

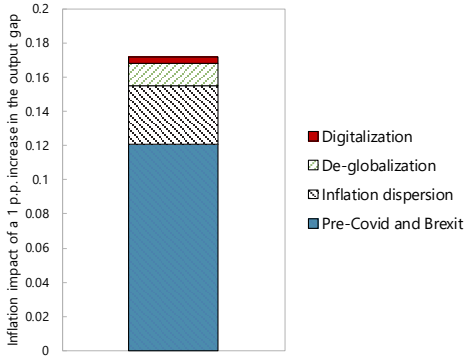
Specifications	Baseline	Robustness
Digitalization	0.0006*	0.0008**
	(-0.0003)	(-0.0003)
De-globalization	0.0066***	0.0063***
	(-0.0012)	(-0.0012)
Inflation dispersion	0.0168***	0.0158***
	(-0.0030)	(-0.0030)

Note: Coefficients correspond to percent increases in e-commerce, percent decreases in import shares, and a standard deviation increase in inflation dispersion respectively. Driscoll-Kraay standard error reported in parentheses. *** ,**, and * respectively indicate 1, 5, and 10 percent significance levels. The robustness specificcation excludes the years 2008-19 and controls for the square of the output gap and inflation expectations terms.

4. Results confirm an important role for structural factors. Price-quote level analysis based on UK data suggests that greater e-commerce intensity at the sectoral level is associated with a significantly higher frequency of price changes.[6] Sectoral Phillips curve estimates suggest that all three structural factors have a statistically significant impact in steepening the Phillips curve. Moreover, these findings are robust to excluding the 2008–10 period associated with the global financial crisis and controlling for non-linearities.

5. The results suggest that the UK could see some steepening in the Phillips curve. Increased inflation dispersion is the largest contributor, accounting for 67 percent of the increase in the slope, while de-globalization and digitalization explain 25 and 8 percent respectively. Our estimates can be considered as a lower bound for the pass-through of shocks to inflation in the current context with high and volatile inflation, in view of Borio et al. (2021)'s findings that such periods are associated with stronger spillovers from relative price changes to broader inflation.

Slope of the Phillips Curve 1/
(Percentage points)



Sources: IMF staff calculations, ONS, BoE Decision Maker Panel

1/ These calculations are based on the online retail share in the UK staying 7 percentage points above the pre-Covid level after 2022 (as per the BoE's Decision Maker Panel), a decline in the share of trade in GDP and rise in inflation dispersion by 2 percentage points (in line with actual changes between 2019 and 2022).

[4] In this specification, π_t and $\hat{y}_t$ were respectively measured using sectoral PPI and deviation of sectoral output from trend, and controls for expected and lagged inflation and real exchange rate movements were included as is standard in the literature along with sector, country, time and sector-country fixed effects. Regarding the structural factors, digitalization was measured by the share of enterprises receiving e-commerce orders, de-globalization was measured through the negative of the share of inputs imported from non-EU countries, and inflation dispersion was calculated as the standard deviation of inflation across sectors.

[5] The estimated Phillips curve represents an average across countries and sectors and may suffer from endogeneity bias arising from policy responses. However, the inclusion of country and sectoral dimensions helps alleviate endogeneity by permitting the use of time fixed effects, and a cross-country average of Advanced European economies is not inappropriate given the high level of market integration between these economies.

[6] This finding is based on a regression of price flexibility (defined as the frequency at which a given item in a given shop changes its price) on e-commerce flexibility at the sectoral rate. It is robust to defining price flexibility with either positive or negative price changes only and including sector and year fixed effects.

INTERNATIONAL MONETARY FUND

UNITED KINGDOM

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

February 1, 2022

Prepared By | European Department

CONTENTS

FUND RELATIONS

(Data as of November 31, 2021)

Membership Status: Joined December 27, 1945; accepted Article VIII.

General Resources Account:

	SDR Million	Percent Quota
Quota	20,155.1	100.00
Fund holdings of currency	15,320.77	76.01
Reserve position in Fund	4,835.38	23.99
New arrangement to borrow	223.68	

SDR Department:

	SDR Million	Percent Allocation
Net cumulative allocations	29,451.96	100.00
Holdings	29,378,14	99.75

Outstanding Purchases and Loans: None

Financial Arrangements: None

Overdue Obligations and Projected Payments to Fund[1]

(SDR Million; based on existing use of resources and present holdings of SDRs):

		Forthcoming			
	2021	2022	2023	2024	2025
Principal					
Charges/Interest	0.53	0.53	0.53	0.53	0.53
Total	0.53	0.53	0.53	0.53	0.53

[1] When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

Exchange Rate Arrangement:

The UK authorities maintain a free floating regime.

The UK accepted the obligations of Article VIII, Sections 2, 3, and 4 on February 15, 1961. It maintains an exchange system free of multiple currency practices and restrictions on payments and transfer for current international transactions, except for exchange restrictions imposed solely for the preservation of national or international security. The UK notifies the Fund of the maintenance of measures imposed solely for the preservation of national and international security under Executive Board Decision No. 144–(52/51). The last of these notifications was made on January 9, 2012 (EBD/12/2).

Article IV Consultation:

The UK is on the standard 12-month consultation cycle. The last Article IV consultation was concluded on December 16, 2020 (IMF Country Report No. 20/320).

FSAP:

An FSAP conducted two virtual missions in June and November 2021. The FSAP team met with met with Chancellor Sunak, Governor Bailey, and CEO Rathi, and their respective staffs at the Her Majesty's Treasury (HMT), the Bank of England (BOE), the Prudential Regulation Authority (PRA), and the Financial Conduct Authority (FCA). It also met staff at the Competition and Markets Authority (CMA), the Financial Services Compensation Scheme (FSCS), and The Pensions Regulator (TPR), and representatives of the financial industry. The 2021 Financial Sector Stability Assessment (FSSA) is being discussed by the IMF Board in conjunction with the 2021 Article IV consultation.

Technical Assistance: None

Resident Representatives: None

STATISTICAL ISSUES

(As of January 2022)

I. Assessment of Data Adequacy for Surveillance
General: Data provision is broadly adequate for surveillance.
National Accounts: The Office for National Statistics (ONS) compiles national accounts in line with the *European System of Accounts 2010 (ESA 2010)* using the production, expenditure, and income approaches. GDP volume measures are derived through annual chain-linking. Monthly GDP is released around the 10th of each month as part of the Short-term Economic Indicators (STEI) theme day; for the second calendar month of each quarter the first quarterly estimate is published alongside monthly GDP. The second quarterly estimate is published around 90 days after the reference quarter. In response to the COVID-19 pandemic, the ONS has developed a *Fortnightly Business Impact of Coronavirus Survey (BICS*) which provides more timely data on economic developments. These data allow the ONS to provide high-frequency indicators that complement the existing monthly and quarterly GDP.
Price Statistics: The official monthly consumer price index (CPI), a composite of urban and rural price data, is available on a timely basis. The reference year of the CPI and CPIH (CPI including owner occupiers' housing costs) is 2015. The Producer Price Index (PPI) is compiled monthly and is available within 6 weeks after the reference month. The index weights are annually chain-linked. The current reference period for the PPI is 2015.
Government Finance Statistics: The ONS compiles government finance statistics in line with the *System of National Accounts (SNA 2008)* and *ESA 2010*. The UK publishes detailed information on the public sector's finances, covering the entire public sector, on a monthly basis and adapts the *ESA 2010* based statistics to produce and disseminate quarterly data compliant with the *2014 Government Finance Statistics Manual (GFSM),* which are included in the IMF's Government Finance Statistics database. HMT disseminates a comprehensive, annual, IFRS based set of financial statements for the entire public sector, including a full balance sheet, in the *Whole of Government Accounts* publication.
Monetary and Financial Statistics: The Bank of England (BoE) has not yet reported to the Fund monetary statistics using the Standardized Report Forms (SRFs) for publication in *International Financial Statistics (IFS)*. Data published in *IFS* are reported by the BoE using the old forms (forms 10R and 20R) with supplementary breakdowns by currency and by type of financial instruments for some accounts in the central bank data retrieved from the BoE website. The IMF's Statistics Department receives source data from BoE for the compilation of the SRFs, although improving the mapping of the source data to the SRFs requires more information. The UK does not report data on the non-bank financial institutions (NBFIs). The BoE reports data on some key indicators of the Financial Access Survey (FAS), including the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the U.N. to monitor Target 8.10 of the Sustainable Development Goals.

Financial Sector Surveillance: The BoE reports all core FSIs and 11 encouraged FSIs for deposit takers, and several FSIs encouraged for other sectors—including FSIs for nonfinancial corporations, households, and real estate markets. Data frequency has improved from semi-annual to quarterly, however, timeliness needs improvement. The FSI data and metadata for the UK are posted on the IMF's FSI website.
External Sector Statistics: The ONS compiles and disseminates detailed quarterly balance of payments and International Investment Position (*BPM6*) since September 2014. The UK's balance of payments statistics is compiled at the same time as the national accounts and is published quarterly on the ONS website 90 days after the end of the reference period. There are several different sources used in the production of BoP statistics, some of which are collected in the ONS's surveys and some of which are provided by external partners such as the BoE and HM Revenue and Customs (HMRC). The country participates in the Coordinated Portfolio Investment Survey, providing the encouraged data by sector of the holder. The UK reports inward and outward Coordinated Direct Investment Survey, including the breakdown of net debt instruments into gross claims and liabilities, and the data template on International Reserves and Foreign Currency Liquidity and the Currency Composition of Official Foreign Exchange Reserves.
II. Data Standards and Quality
The UK subscribes to SDDS and is working towards the eventual adherence to SDDS Plus.

Table 1. United Kingdom: Common Indicators Required for Surveillance

(As of January 4, 2022)

	Date of latest observation	Date received	Frequency of Data[7]	Frequency of Reporting[7]	Frequency of Publication[7]
Exchange Rates	Same day	Same day	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	November 2021	12/03/2021	M	M	M
Reserve/Base Money	November 2021	12/03/2021	M	M	M
Broad Money	Q3 2021	01/04/2021	Q	Q	Q
Central Bank Balance Sheet	December 12, 2021	12/23/2021	W	W	W
Consolidated Balance Sheet of the Banking System	November 2021	101/04/2021	M	M	M
Interest Rates[2]	Same day	Same day	D	D	D
Consumer Price Index	November 2021	12/15/2021	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	Q3 2021	12/21/2021	Q	Q	Q
Revenue, Expenditure, Balance and Composition of Financing[3] – Central Government	November 2021	12/21/2021	M	M	M
Stocks of Central Government and Central Government-Guaranteed Debt[5]	November 2021	12/21/2021	M	M	M
External Current Account Balance	Q3 2021	12/22/2021	Q	Q	Q
International Investment Position[6]	Q3 2021	12/22/2021	Q	Q	Q
Exports and Imports of Goods and Services	Q3 2021	12/22/2021	Q	Q	Q
GDP/GNP	Q3 2021	12/22/2021	Q	Q	Q
Gross External Debt	Q3 2021	12/22/2021	Q	Q	Q

[1] Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[2] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[5] Including currency and maturity composition.
[6] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[7] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

INTERNATIONAL MONETARY FUND

UNITED KINGDOM

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—SUPPLEMENTARY INFORMATION

February 10, 2022

Prepared By European Department

This statement provides information that has become available since the staff report was issued to the Executive Board on February 2, 2022 and updates the staff appraisal.

1. The BoE's Monetary Policy Committee (MPC) raised the Bank Rate by 25 bps to 0.5 percent on February 3. In the press conference, the Bank pushed back against expectations of a long rate hike cycle with a high terminal rate. The MPC also acted on its previous guidance on the quantitative tightening strategy, voting to cease reinvestments of maturing gilts going forward and to initiate corporate bond sales (aimed at unloading all of the BoE's corporate bond holdings by late 2023 at the earliest). The BoE downgraded its 2022 growth forecast from 5 to 3¾ percent, anticipating a sharper and earlier consumption slowdown than staff (and less wage catch-up to inflation). It lifted its near-term inflation forecast to reflect a peak of 7¼ percent in April 2022 (but still returning to the target in 2024). The combination of hawkish near-term guidance but restraining forward guidance is consistent with the dilemma the BoE now faces (i.e., signs of inflation de-anchoring leading to growing expectations in the market of a policy rate overshooting, but with forecasts of a sharp slowdown ahead).

Medium-Term Forecast Comparison
(Percentage change, unless otherwise indicated)

	2022			2023			2024		
	IMF	**BoE (Feb)**	**BoE (Nov)**	**IMF**	**BoE (Feb)**	**BoE (Nov)**	**IMF**	**BoE (Feb)**	**BoE (Nov)**
Real GDP	4.7	3.8	5.0	2.3	1.3	1.5	1.3	1.0	1.0
CPI Inflation, Q4/Q4	5.4	5.8	3.5	2.4	2.5	2.3	2.0	1.8	2.0
Output gap 1/	0.4	0.0	0.3	0.2	-0.5	0.3	-0.1	-0.8	-0.3

Sources: Office for National Statistics; Bank of England and IMF staff estimates.
1/ In percent of potential GDP.

2. The energy regulator in the UK (Ofgem) announced an increase of the energy price cap on February 3. The price cap will increase by 54 percent to £1,971 per year starting on April 1. The price cap is updated twice a year, allowing the

pass-through of energy costs to customers.[1] The last price cap was set in August 2021 and thus did not reflect the record increase in wholesale gas prices over the previous six months. The revision of the price cap to cost-reflective levels is a welcome development, which will help preserve well-functioning energy markets and avoid price distortions in energy consumption and domestic energy production.

3. On the same day, the Treasury announced a support package to help households with the increasing energy bills. The package costs £9.1 billion (0.35 percent of GDP) in 2022–23, and includes universal, targeted, and discretionary elements as follows: i) a repayable discount on energy bills from October 2022, ii) an additional non-repayable rebate in council tax from April 2022, and iii) discretionary funding for households not eligible for the council tax rebate (text table). The authorities also confirmed plans to expand eligibility for the Warm Home Discount by almost a third so that an additional half a million vulnerable households would get a £150 discount in their energy bills from October 2022 (to an amount of £475 million or 0.03 percent of GDP). The authorities' effort to protect households from the cost-of-living increases is broadly in line with staff advice. However, reducing the scope and/or automaticity of the loan program (e.g., for households with above median income), and further increasing the targeted component could be considered.

Energy Bills Rebate		
Measure	**Details**	**Budget Cost**
Repayable discount	A £200 discount on energy bills per electricity customer from October, with automatic equal £40 installments over about five years from 2023.	£5 billion (0.2 percent of GDP) upfront
Non-repayable rebate	An additional £150 rebate in council tax in April, covering about 80 percent of households in England.	£4 billion (0.14 percent of GDP)
Discretionary funding	For local governments to support vulnerable households not eligible for the council tax rebate.	£144 million (0.01 percent of GDP)
Warm Homes Discount	Increase in the eligibility criteria so that the scheme will now cover 3 million low-income households. The discount will be increased from £140 to £150.	£450 million (0.03 percent of GDP)

4. The authorities also presented the "Levelling-up" White Paper, a long-term plan to address regional disparities across the country. The document provides valuable evidence of regional differences in economic outcomes and life chances (e.g., a child on free school meals in London has over twice the chance of going to university than one outside London). It further fleshes out the Build Back Better Strategy defining twelve national targets in important areas such as employment, skills, R&D, health, and transport or connectivity. The document covers the resources needed to meet those targets by 2030, and the resulting budgetary estimates are largely consistent with the allocations of the Spending Review. Staff welcomes the plan but continues to see

[1] The energy price cap is adjusted to reflect changes in underlying costs, such as wholesale energy prices, network and operating costs, and taxes. For further details, please see: https://www.ofgem.gov.uk/information-consumers/energy-advice-households/check-if-energy-price-cap-affects-you.

opportunities to be more ambitious in spending, especially in public investment, education, and training programs.

5. On February 8, the European Commission adopted the decision to extend the temporary equivalence for the UK central counterparties (CCPs) until the end-June 2025. While the 3-year extension alleviates short-term market stability concerns, the status of UK CCPs in the long run remains uncertain. As noted in the FSSA, fragmentation could ultimately lead to increased costs to clear derivatives.

Staff Appraisal

6. The upcoming period, when fiscal performance and the outlook will be reviewed, will present an opportunity to refine the announced energy compensation scheme to support broader government objectives. It could be adjusted to focus the support on low-income households and to better support climate objectives (e.g., by transforming the repayment of the energy bill discount into subsidies for those households willing to invest in green home renovations). To pay for this, and again consistent with the net zero strategy, the authorities could consider raising carbon taxation and/or fuel duties at the time when energy prices start to decline.

7. In other areas, the thrust of the staff appraisal remains unchanged.

Statement by Shona Riach, Executive Director for the United Kingdom,
David Paul Ronicle, Alternate Executive Director,
Dana Andreicut, Advisor to the Executive Director and
Tommy Chrimes, Advisor to the Executive Director
February 16, 2021

As the pandemic has continued to evolve, the recovery in the UK economy has outperformed expectations. The underlying resilience of the economy has been supported by an adapting policy response, delivering faster-than-anticipated growth and a strong recovery in employment. The government has transitioned pandemic-related support towards more targeted fiscal interventions and has anchored fiscal policy around a credible and well-designed medium-term consolidation plan, supported by new fiscal rules. The government's Plan for Jobs supports business to protect and create new jobs, and the government announced a package of measures to support consumers facing energy price rises and cost-of-living pressures. The Bank of England's Monetary Policy Committee (MPC) has increased interest rates to 0.5% to support inflation returning sustainably to the 2% target.

Against the backdrop of continuing uncertainty, the evolving UK economic policy response has aligned with overarching IMF advice, remaining vigilant and adaptable to emerging evidence, looking to make emergency support increasingly targeted, and maintaining an eye on medium-term resilience.

Our authorities welcome the Financial System Stability Assessment's positive endorsement of the UK's effective financial stability framework, its prudential policies, and the overall stability of the UK as a global financial center. The UK financial system is one of the largest and most sophisticated globally, and the authorities take its stewardship extremely seriously. Peer review and transparency are central to that, including notably the FSAP process.

Article IV

With the recovery underway and emergency support being wound down, the government used the October 2021 Budget and Spending Review to set out plans to build back better, by investing in strong public services, driving economic growth, leading the transition to net zero, and supporting people and businesses. This includes a focus on "leveling up" to reduce regional inequalities. At the same time, the government is committed to ensuring that the public finances are on a sustainable path, so that emerging risks can continue to be managed effectively in the future. The three-year Spending Review provides certainty on departmental budgets. New fiscal rules aim to balance enabling record investment with ensuring that debt falls over the medium term, consistent with Fund advice on the importance of maintaining a credible medium-term fiscal anchor. The independent Office for Budget Responsibility continues to be a central pillar of the macro-fiscal framework.

Consumer price inflation has risen markedly in many countries in recent months, including the UK. The MPC's central forecast sees UK CPI inflation peak at just over 7% in April, with price pressures then dissipating over time. The MPC continues to judge that there are two-sided risks around the medium-term inflation outlook, primarily from wage developments on the upside and from energy and global tradable goods prices on the downside.

The Bank of England has been proactive in addressing these challenges. The MPC's remit is clear that the inflation target applies at all times, reflecting the primacy of price stability in the UK monetary policy framework, and the Chancellor has re-affirmed the Bank of England's 2% consumer price inflation target. The framework also recognizes that there will be occasions when inflation will depart from the target as a result of shocks and disturbances – such as the recent unprecedented circumstances. Following on from the decision to raise rates to 0.25% in December (the first rate rise from a major advanced economy central bank since the pandemic began), at its February meeting, the MPC decided to increase Bank Rate by a further 0.25 percentage points, to 0.5%. The MPC also voted in February for the Bank of England to begin to reduce both the stock of UK government bond purchases and the stock of sterling non-financial investment-grade corporate bond purchases by ceasing to reinvest maturing assets, and in addition, initiated a programme of corporate bond sales.

In response to energy price rises and cost-of-living pressures, on 3rd February the government announced a tailored package of support for consumers. The package includes a universal, fiscally-neutral element to help smooth all household energy bills, as well as a more targeted rebate on council taxes, discretionary support for lower-income households, and an expansion of the warm homes discount scheme to support the most vulnerable.

The authorities have also been proactive in winding down exceptional financial sector measures and have begun to adjust macroprudential policy. A one percentage point rise in the counter-cyclical capital buffer has been announced for December 2022, based on the Financial Policy Committee's (FPC's) judgment that overall vulnerabilities are returning to their standard level overall, as was the case just before the pandemic. In due course, absent a material change in the outlook for financial stability, the FPC would expect to increase the rate further to 2%. For now, continued uncertainty about the evolution of the pandemic and the economic outlook means caution is warranted.

Looking beyond the pandemic, the UK faces some similar structural challenges to many other advanced economies and the authorities are looking to proactively address these. Under the government's capital plans, public sector net investment will reach the highest sustained levels as a share of GDP since the late 1970s. Alongside this, a range of reforms to deliver infrastructure projects better, faster, and greener have been advanced. The UK has also volunteered to undertake a Public Investment Management Assessment (PIMA), and was an early adopter of the green PIMA pilot module, with a view to harnessing IMF expertise and international best practice to further improve the UK's strong public investment management

systems. The government is committed to delivering for all parts of the UK, with the "leveling up" agenda – which aims to spread opportunity and improve public services, boost living standards, and empower local leaders and communities – informing spending and policy decisions. The government has described the UK's exit from the EU and the end of the transition period as a chance to do things differently, including through an independent trade policy.

Recognizing that action to mitigate climate change is essential to our long-term prosperity, the UK continues to prioritize both global and domestic action. In 2019, the UK adopted a legally-binding target to reduce its greenhouse gas emissions to net zero by 2050, and last year the government announced plans to reduce greenhouse gas emissions by 78% by 2035 compared to 1990 levels. The system of five-year carbon budgets, established under the 2008 Climate Change Act, provides a robust legal framework for ensuring the UK's commitments are met. The Net Zero Review, released in October 2021, provides economic analysis exploring the key issues and trade-offs as the UK decarbonizes; the Net Zero Strategy and the Heat and Buildings Strategy set out further plans for delivering on the UK's decarbonization commitments. The transition will take time and will not be straightforward, but the UK authorities recognize the need for proactive domestic and international action, with major system-wide decisions to be taken over the next decade if we are to achieve vital global goals and limit the effects of climate change. The UK Emissions Trading Scheme demonstrates commitment to carbon pricing as an effective tool that will help fulfil climate change objectives; it will be aligned with the net zero target, giving industry the certainty it needs to invest in low carbon technologies.

Financial System Stability Assessment

The multi-year build-up of resilience in the UK financial system has proven itself through the course of the pandemic, allowing the financial sector to support the economy in a period of stress. UK banks were central to that, remaining well-capitalized throughout and playing a key role in the successful rollout of government-guaranteed lending schemes. The authorities worked closely with insurers through the crisis to ensure they could continue to provide critical services, and all UK financial market infrastructures demonstrated high levels of operational and financial resilience. So far, there have been no widespread crystallizations of distress in either the household or corporate sectors, and a substantial share of borrowing and use of payment holidays during the crisis appears to have been precautionary. At the heart of this resilience sits effective interagency cooperation; preparing for the UK's departure from the EU, delivering the LIBOR transition, responding to the Covid crisis, and monitoring the regulatory perimeter for new risks all demonstrate how the UK authorities work together to address risks in a collaborative, agile and effective way.

Climate change is one of the biggest global challenges facing the financial sector. Our authorities welcomed the opportunity throughout the FSAP to share their leading approach to

mitigating climate risks and welcomed the IMF's assessment of climate-related balance sheet risks for financial institutions. We are very supportive of IMF efforts to integrate climate analysis into FSAPs and are pleased to be part of this journey. The UK is leading efforts to address climate risk at the international level, through the Network for Greening the Financial System, IOSCO, the FSB, the G7 and G20. Domestically, the UK authorities are taking a wide range of actions to improve the resilience of the UK financial system to address risks from climate change and to support the economy through its transition to net-zero emissions. This includes the Bank of England's Climate Biennial Exploratory Scenario, one of the most ambitious stress testing exercises to-date internationally. The PRA was also the first prudential regulator to set out supervisory expectations around managing financial risks from climate change and the Bank of England the first central bank to have set out a comprehensive framework for greening a monetary policy asset portfolio. In 2020, the UK was also the first country to commit to fully mandatory climate-related financial disclosure requirements across the economy by 2025.

Beyond climate, the global financial system is evolving rapidly and work is underway to ensure that the financial system is ready to serve the future economy. Since the last FSAP in 2016 the authorities have spent substantial time considering how regulation needs to adapt to both foster and support innovation, and at the same ensure provision of financial services remains safe and sustainable. As a result, in many areas the UK has already started to adapt policy frameworks for the future, and is driving change at the international level too, across payments, cyber risks and operational resilience.

However, there is still further to go for regulators globally to fully understand new and evolving areas of the financial system, and there are some questions around how global regulators can best respond to new risks in a timely and agile way where they occur in international markets. The pandemic clearly illustrated that the challenges we are facing are not purely domestic and underscored the urgency of global action to address vulnerabilities in non-bank finance, in particular liquidity mismatches in money market and other investment funds, the use of leverage and exposures to derivatives, and fragile liquidity in some markets. The UK is at the forefront of this international agenda and we look forward to ongoing global collaboration.

Finally, having invested so much time and effort in the FSAP, our authorities were deeply frustrated to see it selectively quoted in Table 11 of the Article IV staff report. It is important for the credibility of IMF surveillance that we work together to ensure full consistency between surveillance products and advice.

Conclusion

Our authorities remain longstanding appreciative consumers of IMF analysis and advice, including through bilateral surveillance consultations. We are grateful to both the Article IV

and FSAP mission teams for their support and constructive dialogue. We look forward to continuing to work with staff on addressing domestic and international macroeconomic challenges.