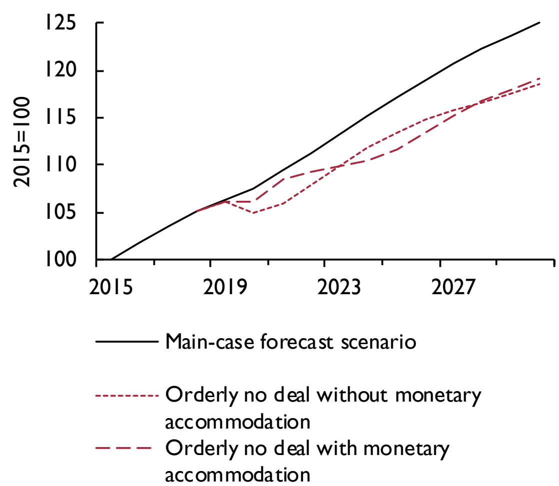
Box A. Brexit assumptions and alternative scenarios

by Arno Hantzsche

Brexit forms the single most important risk to the UK economic outlook and assumptions about the type of exit, the timing and eventual policy responses determine our projections to a large extent. Instead of averaging across a range of different scenarios, we continue to describe a coherent main case consistent ultimately with a 'soft' form of Brexit and contrast it with a 'harder' exit scenario, while discussing risks around each case. This box explains the assumptions that underlie both scenarios.

Figure A1. The impact of different Brexit scenarios on real GDP



Source: NIESR, NiGEM simulation.

Main-case forecast scenario

In this scenario, elevated levels of political and economic uncertainty persist for some time as Brexit negotiations continue. Little changes regarding the trading relationship between the UK and EU in the short term as the UK retains nearly frictionless access to the European single market and customs union. This scenario is consistent with the UK leaving the EU on 31 October along the lines of the negotiated withdrawal agreement, followed by a transition period of around two years during which the future trading relationship is being negotiated. A further Brexit extension, some form of standstill agreement, or a revocation of Article 50 are also consistent with the main-case scenario. This scenario is also in line with forecasts previously published by NIESR once the rise in uncertainty is taken into account.

In the main-case forecast scenario, higher uncertainty is reflected in lower investment, consumption and productivity and a negative residual is also applied to the export equation. We assume that stocks built up prior to the initial exit date at the end of March are gradually being depleted, acting as a drag on economic activity in the quarters ahead. The UK would meet its obligations under the financial settlement and continue to make contributions to EU programmes such that net fiscal transfers would not be much different from today.

Figure A1 shows that the growth path of GDP is dampened for 2–3 years as a result of elevated uncertainty before the economy reverts back to its long-run growth trend if frictions to UK-EU trade remain limited. While consistent with the main case in the short run, a customs union deal between the UK and EU would lead to a 3 per cent reduction in economic output relative to the soft Brexit case (not shown, see Hantzsche and Young, 2019) and if a free-trade agreement were to be struck this would make the economy some 4 per cent smaller (not shown, see Hantzsche, Kara and Young, 2018).

Alternative case: orderly no-deal Brexit

In this scenario, the UK exits the EU on 31 October without a deal, i.e. the negotiated withdrawal agreement is not ratified, there is no transition period and the political declaration on the future trading relationship will not apply. The UK reverts to trade on WTO terms, regulatory barriers are erected and customs duties collected at the border.

In the long run, we assume in line with empirical evidence that UK-EU trade is 50–60 per cent lower compared to continued EU single market and customs union membership; foreign direct investment would be lower by one quarter; net migration would be reduced by 100,000 persons a year; labour productivity would be lower by 1.6 per cent; and the UK would no longer contribute to the EU budget once outstanding liabilities are repaid (for details see Hantzsche *et al.*, 2018).

Over the medium-run forecast horizon, the economic outlook would depend on the level of preparedness of firms, households and the government, on how quickly barriers to tariff and non-tariff barriers to trade were erected, and on macroeconomic stabilisation policies.

Contingency measures. We assume that the exit is orderly in the sense that short-term contingency measures are put in place and financial stability is safeguarded. The Bank of England is convinced that the UK banking system would withstand the

Box A. (continued)

range of economic and financial shocks associated with a no-deal exit (Bank of England, 2019). It is likely that no-deal preparations would be stepped up once a new Prime Minister is in office and in a review of no-deal preparations the European Commission in June concluded that "there is no need to amend any measures on substance and that they remain fit for purpose" (European Commission, 2019).

Table A1 highlights a number of contingency measures adopted or planned by the British government and the European Commission. Importantly, most of these measures would only be effective if reciprocated by both sides. The EU has made it clear that several measures, for instance regarding financial services, are explicitly temporary and serve the purpose of allowing EU importers time to switch to non-UK suppliers. There is also a risk that firms and households have become complacent after two Brexit deadlines had run out without effect in the first half of this year. Warehouse space already limits further stockbuilding activity and will do so in particular prior to Black Friday and Christmas sales. Some cash-strapped companies may not be able to step up no-deal preparations.

Table A1. Proposed contingency measures for the no-deal case

Area	EU measures	UK measures	Implications for no-deal modelling
Citizens	Period of residence of UK citizens in EU counted towards status of third-country nationals, visa exemption for short stay.	Intention to treat EU citizens in UK in same way.	Negative impact on net migration partly dampened as work visas required if pre-withdrawal residence less than 5 years.
Financial services	Temporary (12–24 months) equivalence granted for key services (central clearing of derivatives, central securities depositories, over-the-counter derivatives).	Approach set out to bring EU financial services legislation into domestic law, temporary permissions regime allowing EU firms to operate in and passport into UK.	Only key services covered but UK financial services providers lose passport to operate in EU, facilitating more gradual adjustment of services trade volume.
Air transport	12-months provision to allow air traffic, 9-months extension of aviation safety certificates.	Government envisages granting EU airlines permission to continue to operate, international safeguards agreement signed.	Passenger and cargo traffic by air to continue uninterruptedly mitigating overall impact on goods and services trade.
Road haulage	UK operators licensed for 9 months to carry goods into EU.	Legislation providing flexibility to set up permit system.	Mitigates disruption to goods trade immediately after exit.
Customs and goods trade	Time limits for lodging of customs declarations, member states called to prepare customs checks. Investments made in border infrastructure and staff.	Cross-border trade bill updated to provide functioning customs and trade regime, additional border force staff hired. Under the temporary tariff regime 87% of imports would be tariff free.	While duties and taxes apply fully and impact on trade volumes, preparedness of staff and infra-structure prevents additional temporary disruptions.
Sanitary and phytosanitary rules	Intention to authorise entry of live animals and animal products. New border inspection posts set up.	New import notification system planned to facilitate imports of live animals and animal products.	Mitigates impact on trade in these areas permanently.
Trade agreements with third countries		Continuity deals agreed with 11 non-EU countries/regions (around 50% of relevant trade)	Assume equivalent bilateral agreements with current EU FTA partners are made or fully replaced with agreements with non-EU FTA partners.
EU funding		Continued (domestic) funding guaranteed for structural and investment projects, rural development.	Contributions to EU budget recycled into domestic spending, impact on EU fund recipients mitigated.
Regulation		EU Withdrawal Act 2018 adopts EU law, UK regulators will be transferred competencies previously held by EU regulators.	Prevents uncertainty about sudden changes to regulation while allowing regulatory divergence of time.

Box A. (continued)

Putting procedures, infrastructure and staff in place to facilitate visa applications and customs checks will help mitigate temporary disruptions and queues but does not change the fact that freedom of movement would end, a number of services may no longer be licensed to trade, and the cross-border costs of goods trade would increase. For instance, food imports would have to undergo veterinary and safety checks, border delays may interrupt tightly tuned value chains in the production sector and uncertainty about the immigration regime may lead to increased staff shortages, in particular in the health and social care sectors (Dolton, Nguyen, Castellanos and Rolfe, 2018).

We account for short-term disruptions in our scenario by assuming an initial 1 per cent drop in productivity, higher investment premia, lower equity prices (equity premium) and higher borrowing costs (term premium) relative to the main-case scenario. A quarter of the long-run impact on trade occurs immediately upon exit in this scenario, gradually increasing over time as border checks are enforced and regulatory barriers become binding.

Macroeconomic stabilisation policies. Higher trade barriers, higher uncertainty and lower productivity in our analysis lead to an immediate fall in economic output and disposable income. To smooth the economic adjustment, a mix of macroeconomic stabilisation policies is likely to be activated. While targeted fiscal policy measures may be able to redistribute income to sectors and individuals most affected by a no-deal exit, Box C discusses that the macroeconomic effect of tax and spending measures aimed at stabilising aggregate demand is small, as these measures tend to be crowded out by exchange rate adjustments in open economies like the United Kingdom. Monetary policy would be more effective but faces the trade-off between fighting higher inflation, as a result of higher import prices and a sharp exchange rate depreciation, and stabilising the level of output.

Figure A1 shows the path of GDP under no deal for two different monetary policy responses. In the first variant, monetary policy responds mechanically to higher inflation and lower output. Given the dominance of supply side shocks associated with a no-deal Brexit in our analysis, interest rates rise sharply in this variant and to 3 per cent by 2020. The recent past shows that this is not a very realistic assumption as the Bank of England has tended to look through temporary episodes of elevated inflation. In the second variant (which in this chapter serves as the main no-deal variant), we assume that Bank Rate is instead cut by 50 basis points immediately after exit to smooth the response of output. Within two years of exit, Bank Rate then rises more steeply compared to the main-case forecast to alleviate rising inflationary pressures.

Figure A1 shows that with this type of response the economy is able to avoid a deep downturn, holding all else equal (table 1 in the chapter summarises the response of other variables over the forecast horizon). However, this response is only available if inflation expectations remain well anchored and the inflationary uptick temporary (see also Hantzsche and Kara, 2019). Figure A1 also makes clear that demand-side policies can spread the cost of adjustment over time but, in the long run, differences in the level of GDP across Brexit scenarios depend on the supply of capital, labour and how efficiently these production factors are combined (see also the Commentary in this *Review*). We estimate that GDP would be 5–6 per cent lower in the long run under a no-deal scenario compared to the main-case scenario.

REFERENCES

Bank of England (2019), *Financial Stability Report*, July.

European Commission (2019), ‘No-deal’ Brexit: European Commission takes stock of preparations ahead of the June European Council (Article 50), Press release.

Dolton, P., Nguyen, D., Castellanos, M. and Rolfe, H. (2018), *Brexit and the Health and Social Care Workforce in the UK*, NIESR report, November 2018.

Hantzsche, A. and Kara, A. (2019), 'Policy options for a no-deal Brexit', Box B, Prospects for the UK economy, *National Institute Economic Review*, 247, February.

Hantzsche, A., Kara, A. and Young, G. (2018), *The Economic Effects of the Government’s Proposed Brexit Deal*, NIESR report, November 2018, also published in The World Economy, 42(1), pp. 5–20.

Hantzsche, A. and Young, G. (2019), *The Economic Impact on the United Kingdom of a Customs Union Deal with the European Union*, NIESR report, May.