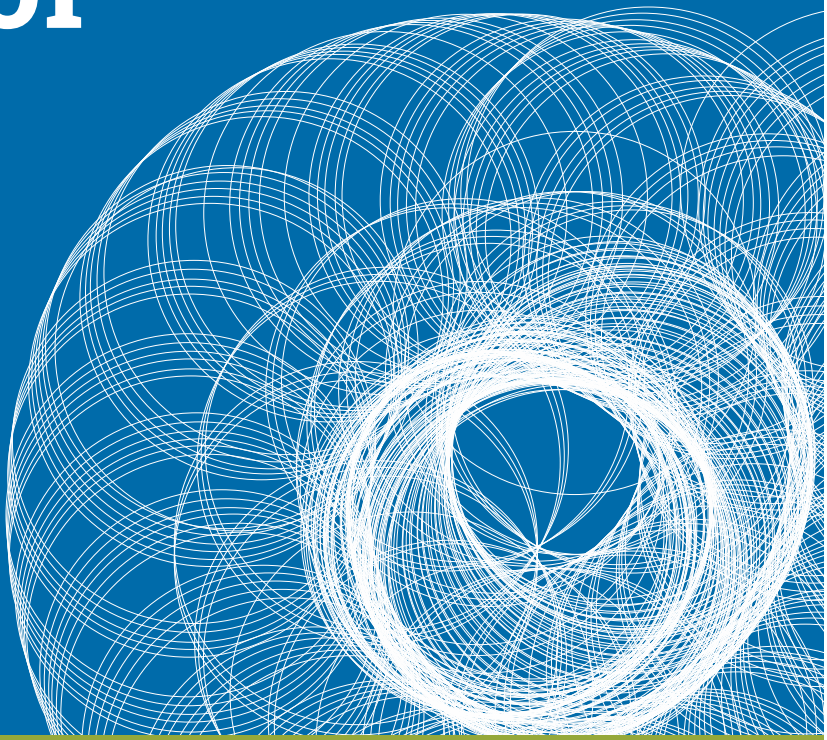
Scotianomics
STRATEGIC | INTELLIGENCE

Global risk monitor

Crisis Contagion, Country Vulnerability, and Global Strategy



Global risk report: Project Leader Samuel MacKinnon
April 2020

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About Scotianomics

In the 21st century data is everywhere but it is the analysis that transforms data into valuable, actionable knowledge that is key to success.

Organisations, both in Scotland's private and public sectors, lack access to useful, reliable data and value-added analysis of the kind that most advanced countries take for granted. This creates a hidden but real disadvantage for Scottish business, limits public policy and disrupts the pursuit of shared prosperity.

Scotianomics aims to spark a knowledge revolution and inform the decision makers on Scotland's economy. We provide cutting-edge intelligence and strategic planning resources so that stakeholders can gain a wide view of the threats and opportunities in the world through our geopolitical, economic and policy analysis, unique historical datasets, risk and opportunity forecasts, Geographic Information System mapping solutions and strategic planning services.

Gordon MacIntyre-Kemp

Director

Executive summary

- This report introduces a dataset that defines the level of risk that the world's developed economies are exposed to.
- It does so by calculating the risks involved in a country's trade relationships and measuring this against that country's own social performance and size.
- This dataset can be used to aid strategic planning by any organisation concerned with global governance and/or who has political and economic relationships abroad.
- It can be used by businesses to inform investment decisions by anticipating how safe an investment in a particular country would be, NGOs to allocate international crisis-management resources efficiently, or to inform and encourage governments to build international political relationships that would facilitate early and effective crisis response.
- We identify that the level of risk exposure of developed economies has been increasing significantly in recent years, to such an extent as to threaten the gains of globalisation. To address this, we encourage increased multilateral cooperation between governments on issues such as trade and shared standards.
- We encourage the Scottish Government to develop higher quality data resources, particularly in the area of trade, to help it identify the risk exposure of Scotland and therefore increase the ability of Scotland to anticipate and mitigate crises. Alongside this, the Scottish Government should also build political networks across the globe, that would exist in parallel to Scotland's key trading relationships.
- We also identify that the UK is highly vulnerable to crises. Hence, as a region of the UK, the Scottish Government must also consider ways to buffer Scotland against the high levels of risk it is likely exposed to as a result. Particularly, the Scottish Government should consider how it can increase its resources, crisis fighting capacity and policy independence.

Introduction

This is an unprecedented point in history. A pandemic is impacting on the economic and social well-being of the entire globe. Whilst the possibility of this kind of event occurring was known, no serious measures or strategies were in place to address it decisively at an early stage. As a result, every area of life is negatively affected, from global and local politics, to economics, community cohesion and, of course, health.

Events such as this become increasingly likely as globalisation proceeds and technological development advances. This century will see many more of them. Big events like this will also punctuate many, more frequent crises. Since the new millennium, we have seen renewed geopolitical competition involving Britain, the EU, America, Russia, Turkey, and China. We have seen unrest in Sudan, Hong Kong, Catalonia, Lebanon, Iran, Libya and Egypt. Many Middle Eastern societies have been trapped in unending conflict and we have seen debt crises grip the world.

If governments and businesses are to prevent events like this from occurring in the future, or be more prepared for them when they arrive, they need tools for monitoring and predicting crises. Today local crises can easily become global. Such a tool should therefore identify the structurally important countries that are most at risk. By doing so, containment measures can be crafted faster, while encouraging the key players to engage in multilateral cooperation.

This document introduces a global risk monitor for members of the developed countries' club, the Organisation for Economic Cooperation and Development. For time-series data on each country, visit the scotianomics.org website.

It can be used by businesses, NGOs, governments and individual researchers to anticipate where crises will likely spread to and to monitor fluctuations of risk in the world. As such, it can inform crisis resilience and mitigation strategies, such as where is safest to invest, where to allocate international crisis-management resources, and which governments should prioritise extensive political relationships abroad.

This is the first version of this dataset, covering overall risk (that is, risk across many areas). It cannot presently be used to identify what specific kinds of risk may be transferred via economic relationships (for example, risks originating in areas such as health, the environment, political systems, and so on). Future editions will work to make it more detailed.

Methodology

This index captures how local risks are shared globally through international trading relationships (both import and export partnerships). There are two kinds of risks expressed here. The first is directly transferable risks; risks that can spread from one country to another. For example, viruses, financial market contagion, or the potential for trade warfare. The second is indirectly transferable risk; risks that do not spread in their original form (as they are locked into their local setting) but can create international economic shocks as trading relationships break down as a consequence. For example, how a political crisis, civil conflict, or catastrophic event such as an environmental disater can disrupt import and export flows.

Local risks are shared globally through international trading relationships.

This edition focusses on the international risks to which members of the Observatory for Economic Cooperation and Development (OECD) are exposed. For each OECD member, we produce an overall risk score composed of several components.

Identifying risk exposure through trade

The first component is risk exposure through bilateral trading risks. Using bilateral trade data produced by the OECD[1], we convert tables of trade between an OECD member state and each of their individual trading partners from a monetary value to be expressed as a percentage of that member state's GDP. This identifies how important each individual trading partnership is to that member state's economy. Increased trade with another country as a share of GDP means greater economic dependency on that country, more travel between the countries, and it often implies greater geographic proximity between them too.

This means that any political, social, environmental, economic, or health crises in the partner country is more likely to affect the reporting country — depending on how much they trade with one another.

Next, we must identify the likelihood that there are significant political, social, environmental, economic or health risks that could be transferred and/or disrupt trade. For this, we use an existing index that measures state fragility for a large population of countries across all these dimensions of risk, sourced from the Fund for Peace, with coverage starting in 2006[2].

1 OECD (2020) 'EBOPS 2010' – Trade in Services by Partner Economy', Available Online: [https://stats.oecd.org/Index.aspx?DataSetCode=TISP_EBOPS2010#]; OECD (2020) 'EBOPS 2002 – Balanced International Trade in Services', Available Online: [https://stats.oecd.org/Index.aspx?DataSetCode=TISP_EBOPS2010#]; OECD (2020) 'Bilateral Trade in Goods by Industry and End-use', Available Online: [https://stats.oecd.org/index.aspx?queryid=64755#].

2 Fund for Peace (2020) 'Fragile States Index: Measuring Fragility, Risk and Vulnerability in 178 Countries', Available Online: [https://fragilestatesindex.org/].

To complete the first component, the state fragility score of each OECD member state's trading partner is multiplied by that partner's value of trade as a percentage of the OECD member state's GDP. We have now identified the risks entailed in each trading relationship of the OECD member state. By summing each trading relationship we have an aggregate risk exposure score.

Assessing a country's ability to handle crises

The level of risk a country is exposed to due to its economic relationships does not itself express its vulnerability. Once we identify the level of risk to which each OECD member state is exposed, it is necessary to assess their ability to effectively manage risks were they to transform into actual crises. Some countries may be more resilient and manage crises better than others. Therefore, the aggregate risk score is then multiplied by a value expressing the OECD member state's own political, economic, and social performance, using its score in the Fund for Peace index.

The level of risk a country is exposed to due to its economic relationships does not itself express its vulnerability.

The final step is to balance the risk score produced in the above step by the size of the country. Larger countries are composed of larger, more complex social networks, meaning that there is an increasing potential for unforeseen consequences and additional crises to emerge from all the interacting parts of such organisations, were they to be disrupted by external shocks.

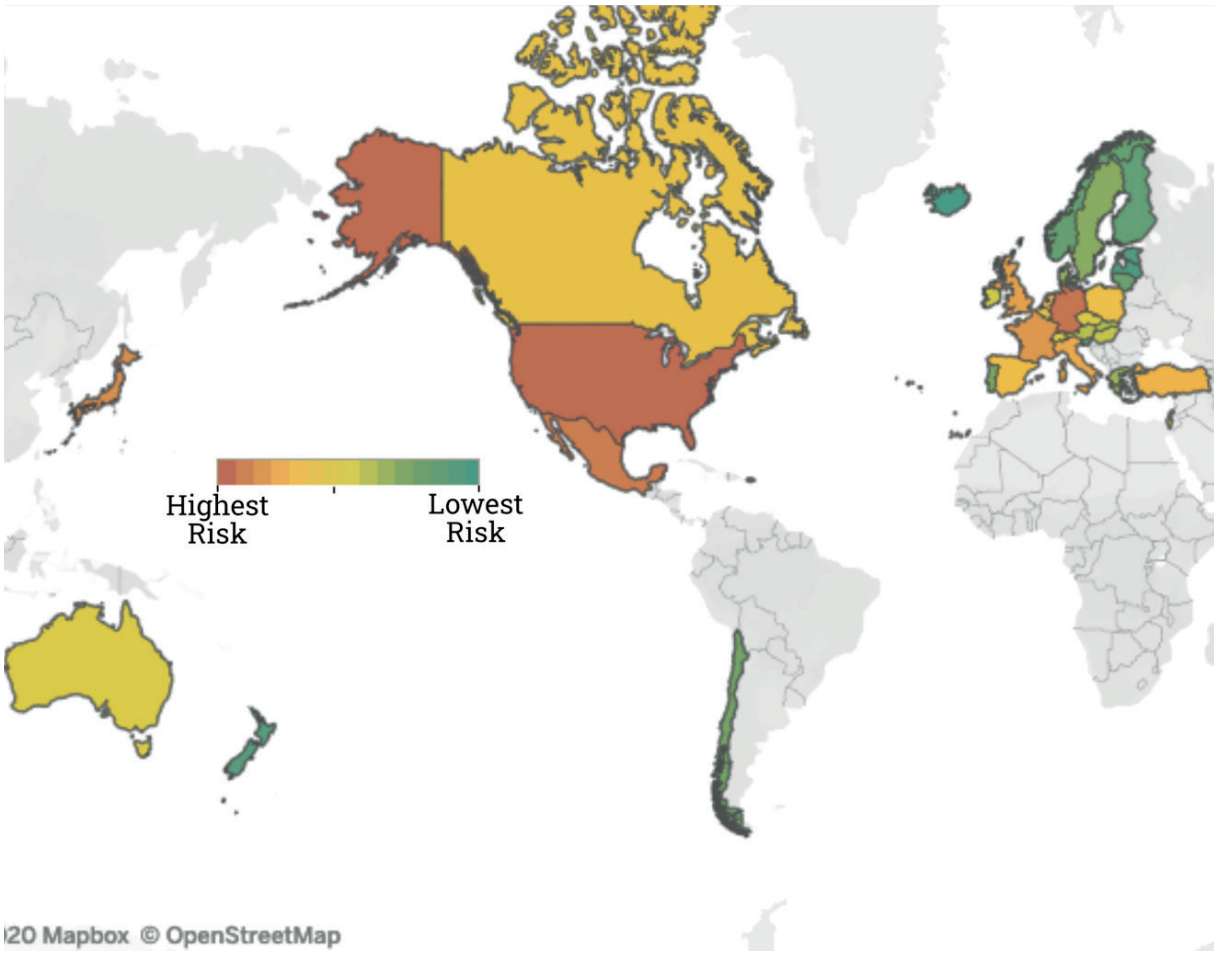
There is evidence that the size of a country impacts on its policy performance. Smaller countries are found to be more democratic, transparent, and politically coherent[3]. With fewer voices to satisfy, and thus fewer barriers to crafting and implementing urgent policies, alongside a greater need for accountability, smaller countries should be more agile during times of economic and social crisis. To account for this, we identify the share of the total GDP of the OECD taken by each of its member states.[4] Aggregate GDP is useful for this in three senses: it embodies both population size, and thus government size, as well as the scale of local economic networks (and therefore the number of potential economic vulnerabilities). Once the GDP shares of each OECD member are found, we use these to balance the values produced in the previous step.

3 Streeck, W. (2019) 'Reflections on Political Scale', Jurisprudence, 10:1, 1-14, Available Online: [https://www.tandfonline.com/doi/full/10.1080/20403313.2018.1554939]; J. & Veenedaal, W. (2018) Democracy in Small States: Persisting Against All Odds, Oxford University Press; Anckar, D. (2010) 'Small is Democratic, But Who is Small?', Arts and Social Sciences Journal, 2, 1-10, Available Online: [https://astonjournals.com/manuscripts/Vol2010/ASSJ-2_Vol2010.pdf].

4 OECD (2020) 'Gross Domestic Product', Available Online: [https://stats.oecd.org/index.aspx?queryid=60702].

Results

Figure 1. Global risk exposure of OECD member states

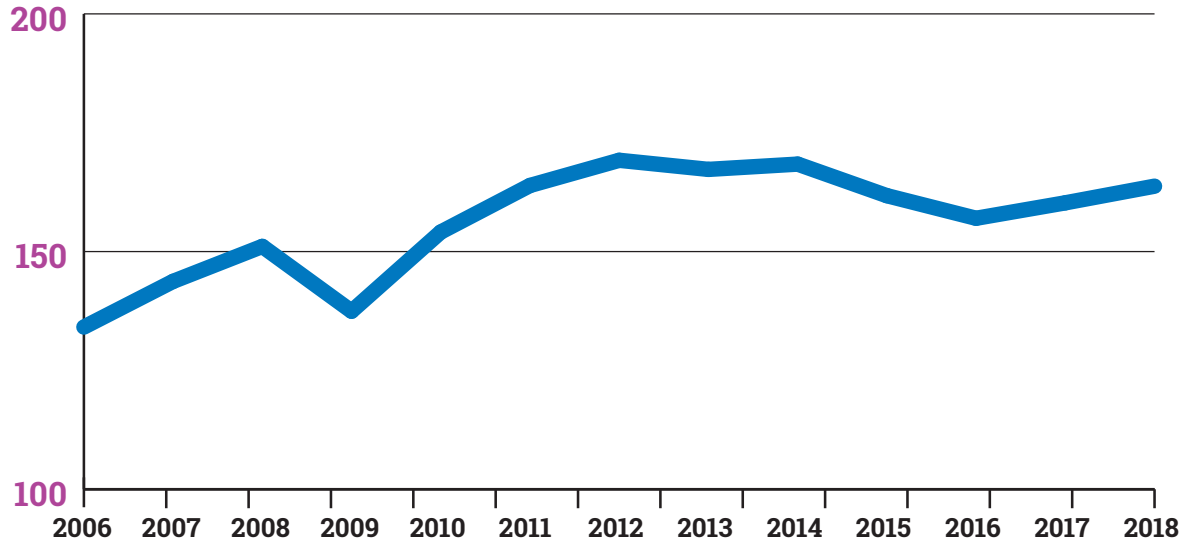


Note: The full index of country comparisons for 2018 can be found in the appendix of this report. The OECD includes Australia, Austria, Belgium, Canada, Switzerland, Chile Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Israel, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Sweden, Turkey, the United States and the United Kingdom.

Since 2006, there has been a clear trend of increasing risks globally. This is due partly to increasing political instability within the OECD itself, fuelled by the economic stagnation arising from, and policy choices intended to deal with, the financial crisis.

Figure 2. Global Risk Exposure of the OECD Bloc

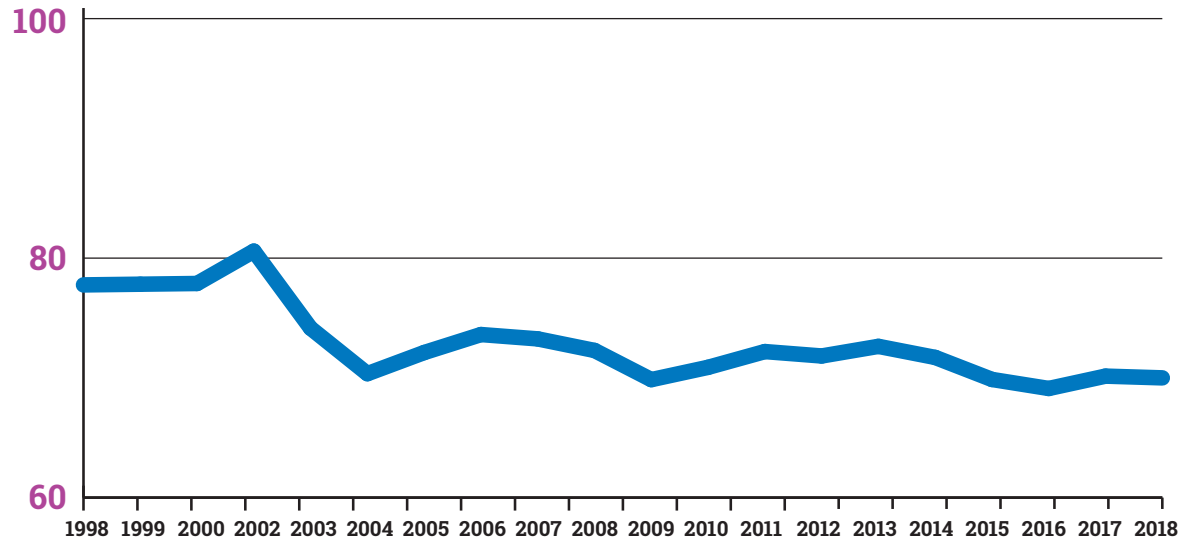
(Higher scores are worse)



Source: Fund for Peace and OECD[5] *– author's own calculations.*

Figure 3. Average political stability and absence of violence/terrorism of OECD members

(higher scores are better)



Source: World Governance Indicators[6]

5 Fund for Peace (2020) 'Fragile States Index: Measuring Fragility, Risk and Vulnerability in 178 Countries', Available Online: [https://fragilestatesindex.org/]; OECD (2020) 'EBOPS 2010' – Trade in Services by Partner Economy', Available Online: [https://stats.oecd.org/Index.aspx?DataSetCode=TISP_EBOPS2010#]; OECD (2020) 'EBOPS 2002 – Balanced International Trade in Services', Available Online: [https://stats.oecd.org/Index.aspx?DataSetCode=TISP_EBOPS2010#]; OECD (2020) 'Bilateral Trade in Goods by Industry and End-use', Available Online: [https://stats.oecd.org/index.aspx?queryid=64755#].

6 World Bank (2020) 'World Governance Indicators', Available Online: [https://info.worldbank.org/governance/wgi/].

The primary factor driving this increased insecurity has been the rise of the developing world. Emerging markets have ascended from 37 per cent of global GDP in 1990 to around 60 per cent today[7]. The improvements in those countries as a result has been remarkable: on aggregate, people are better fed, medicated and educated than ever before. [8]

Yet there are emerging problems as well. The rise of developing countries has often been at the expense of traditional industries in the West. Those regions in electoral revolt and backing populists are the deindustrialised communities that saw few gains under globalisation. This is one source of increased global instability. A second is that political systems in developing countries remain fragile, more corrupt, vulnerable to dictatorship, and thus more unpredictable. As they come to influence more of our lives in the West through increasing economic and technological links, so too do their underdeveloped political systems threaten to facilitate events that disrupt our lives more.

A way needs to be found, therefore, to balance the risks of globalisation with its benefits in a manner that has not yet been achieved. The resource presented here should serve as a basis for that, helping public and private organisations to identify shared risks and to create co-operative strategies to overcome them.

7 IMF (2020) 'GDP Based on PPP, Share of World', Available Online: [https://www.imf.org/external/datamapper/PPPSH@WEO/OEMDC/ADVEC/WEOWORLD].

8 United Nations (2020) 'Human Development Index', Available Online: [http://hdr.undp.org/en/data].

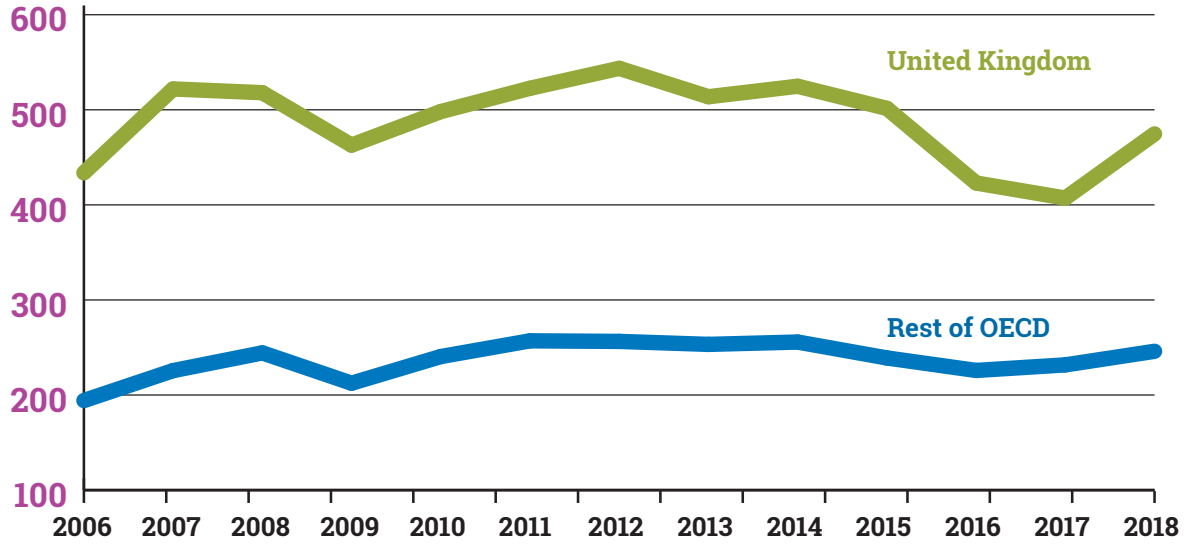
The UK's Vulnerability

Below we compare the UK's exposure and vulnerability to international risks to the average of other OECD member states. The index highlights that the UK is vulnerable to higher than average risk levels when compared to its OECD counterparts.

While exposed to fewer risks, the UK is more vulnerable to them as a result of its more unstable political and social environment.

Figure 4. Global risk exposure and vulnerability of the UK and other OECD member states

(higher scores are worse)



Source: Fund for Peace and OECD – authors' own calculations.

This is not so much due to the UK's risk exposure through trade. Like larger countries, trade accounts for a lesser share of its GDP; whereas, typically, smaller countries tend to rely more on international trade.[9] While exposed to fewer risks, the UK is more vulnerable to them as a result of its more unstable political and social environment, as well as its larger size. This, therefore, reduces its capacity and ability to deal with crises in an effective fashion.

There are examples that can support this insight. Two case studies are discussed here: the response to the global financial crisis as well as the ongoing COVID-19 pandemic.

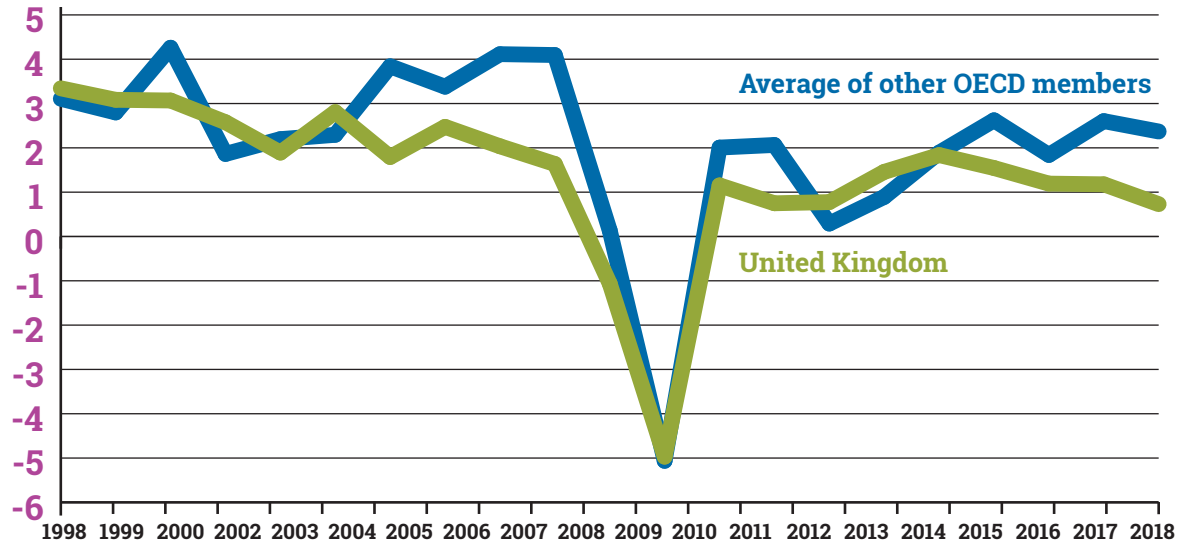
9 Federal Reserve Bank of St. Louis (2017) 'Are You Open: The Openness Index Measures Countries' Exposure to International Trade?', Available Online: [https://fredblog.stlouisfed.org/2017/05/are-you-open/].

Handling of the global financial crisis

Prior to the COVID-19 crisis, the most recent major global crisis – the financial crash – began in 2007. Here we assess the different outcomes of the crash, economically and politically, for the UK and other members of the OECD, to judge the vulnerability of the UK.

Macroeconomic performance

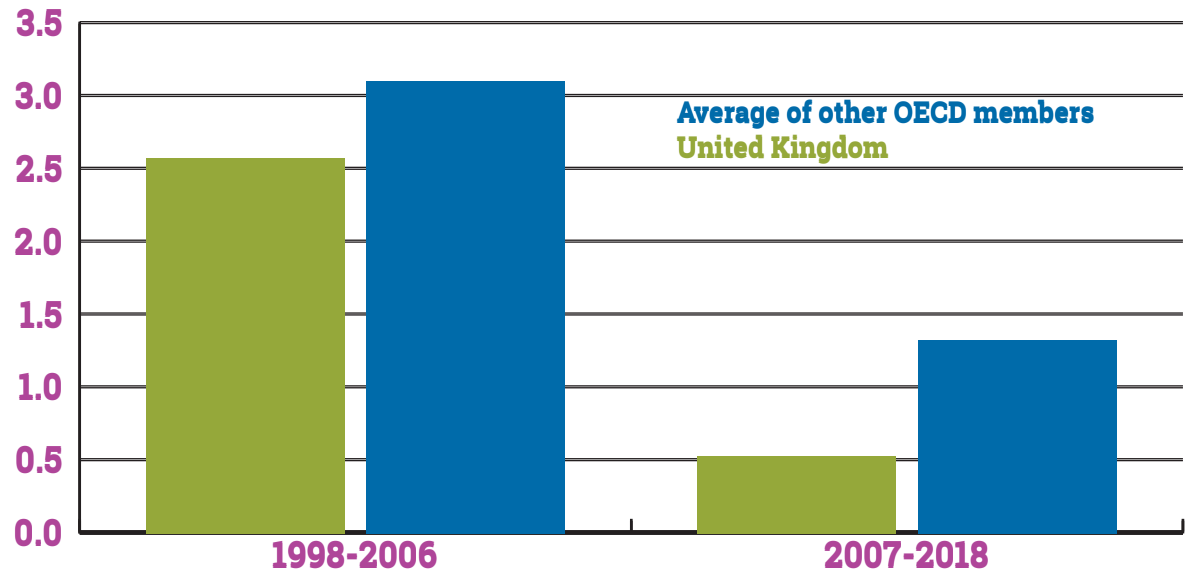
Figure 5. GDP per head growth before and after the crisis — time-series (%)



Source: World Bank[10]

10 World Bank (2020) 'GDP Per Capita Growth (Annual %)', Available Online: [https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG?end=2018&locations=OE-GB&start=1983].

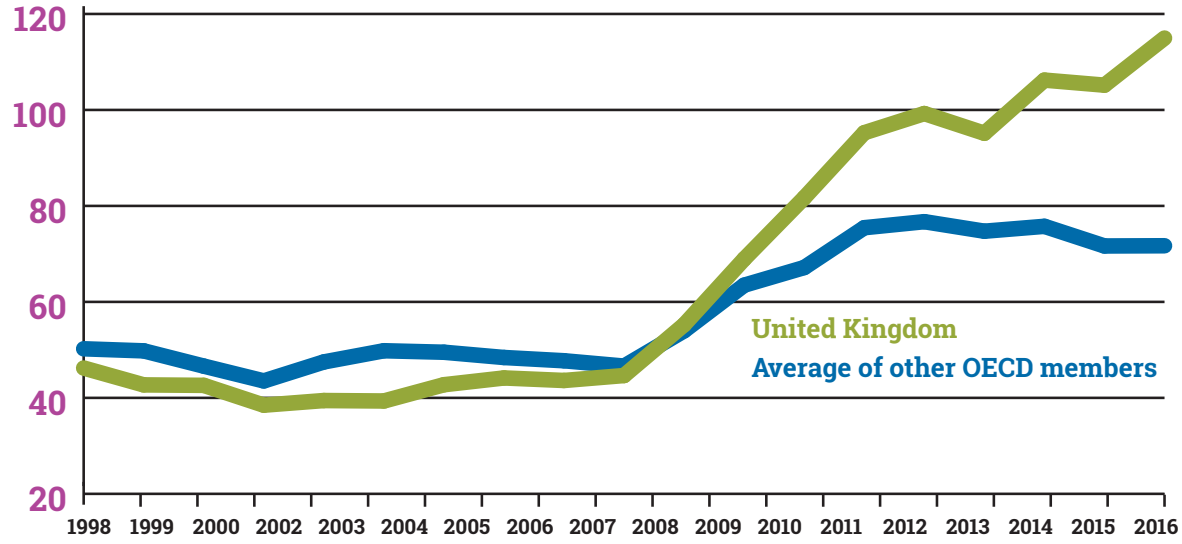
Figure 6. GDP per head growth before and after the crisis – annual averages (%)



Source: World Bank

The OECD as a whole fell into recession as a result of the crisis. However, the UK's recession was longer than the OECD average – 2 years for the former and 1 year for the latter. Moreover, the average recovery of other OECD member states was greater, with growth superior to that registered by the UK.

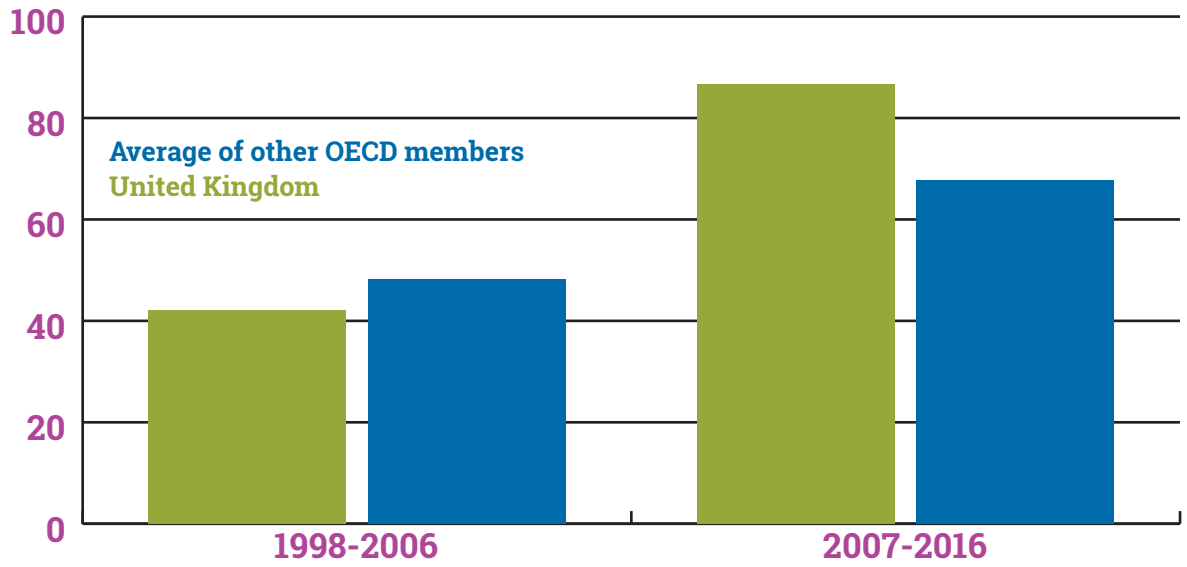
Figure 7. Government debt before and after the crisis – time-series (% GDP)



Source: World Bank[11]

11 World Bank (2020) 'Central Government Debt, Total (% of GDP)', Available Online: [https://data.worldbank.org/indicator/GC.DOD.TOTL.GD.ZS].

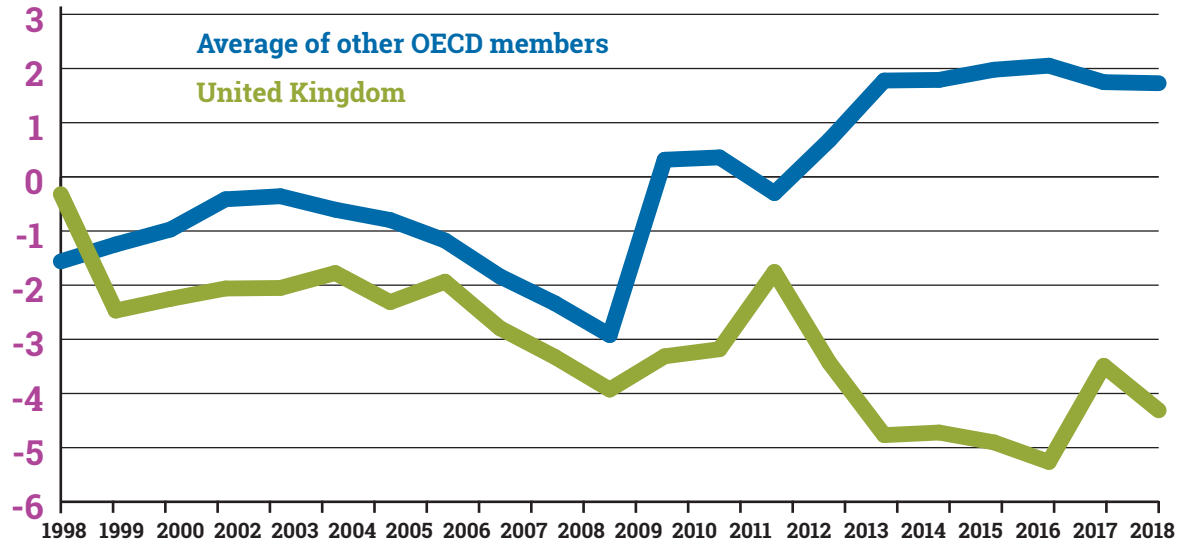
Figure 8. Government debt before and after the crisis — annual average (% GDP)



Source: World Bank

Likewise, the UK experienced higher increases in public debt, which now far exceeds the average of other OECD members in relation to GDP.

Figure 9. Current account before and after the crisis — time-series (% GDP)

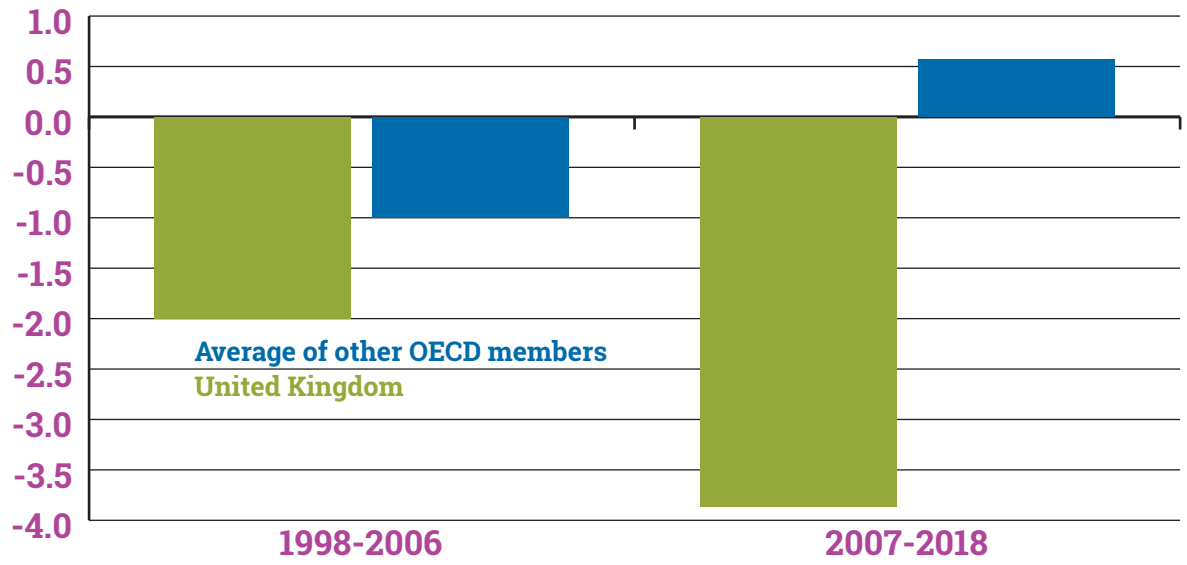


Source: World Bank[12]

Note: The current account is a balance of payments record of a country's international transactions with the rest of the world. A negative current account means that there is an outflow of capital from one country to the rest of the world, which is typically viewed as an unstable or undesirable situation for a country to be in.

12 World Bank (2020) 'Current Account Balance (% GDP)', Available Online: [https://data.worldbank.org/indicator/bn.cab.xoka.gd.zs].

Figure 10. Current account before and after the crisis — annual average (% GDP)

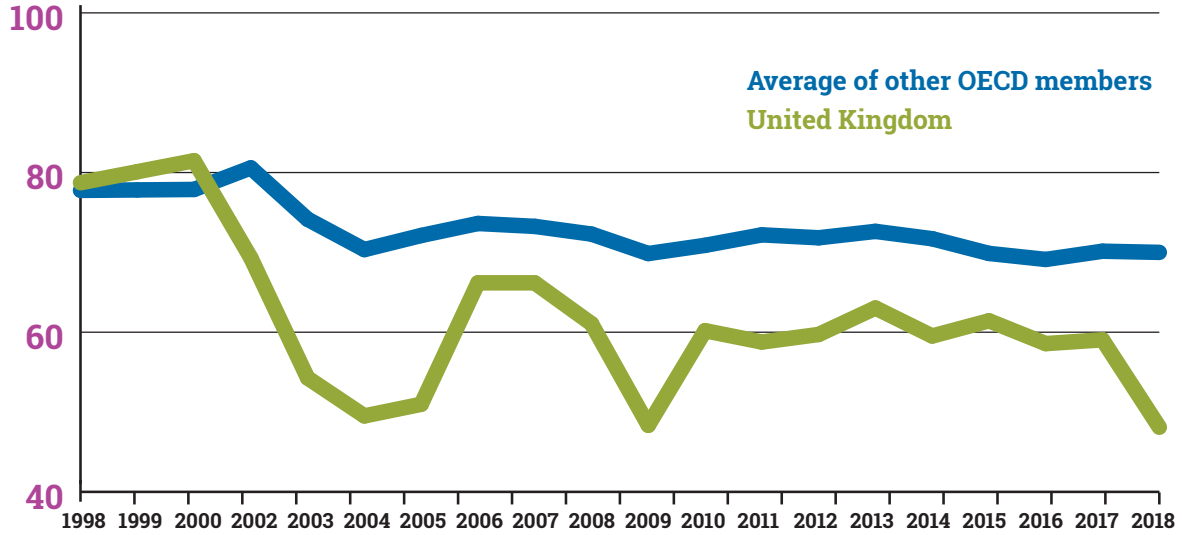


Source: World Bank

Before the financial crisis, OECD members on average had a current account deficit. After the crisis, the other OECD members managed to stabilise and create current account surpluses; the UK, on the other hand, fell into a much deeper current account deficit. This is a highly unstable situation for the UK.[13]

Political performance

Figure 11. Political stability and absence of violence/terrorism before and after crash — time-series (higher scores are better)

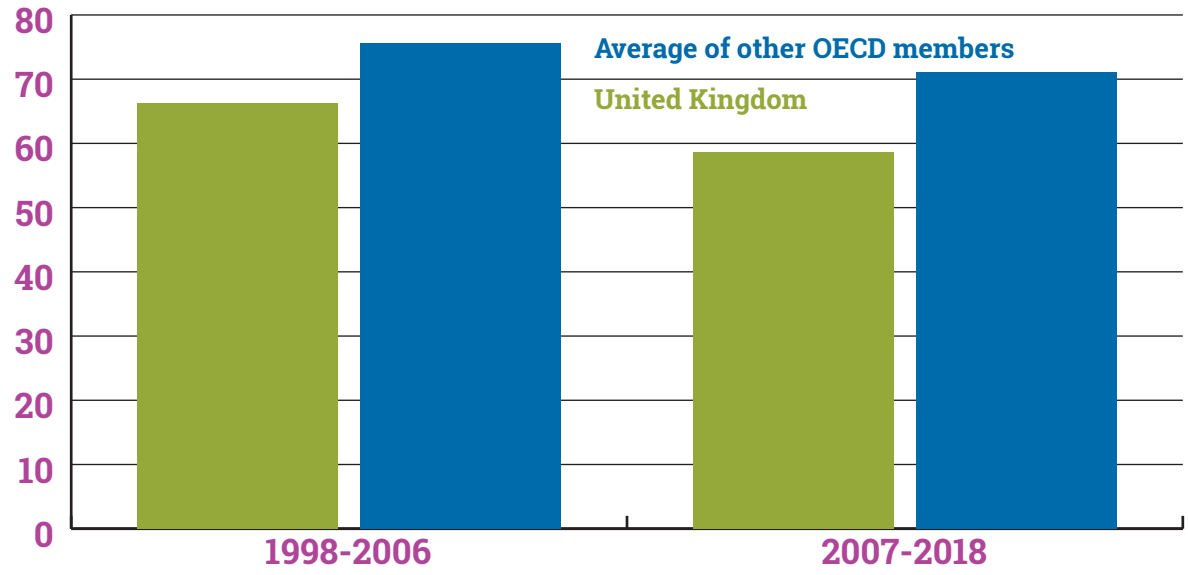


Source: World Governance Indicators

13 Blakely, G. (2018) 'On Borrowed Time: Finance and the UK's Current Account Deficit', Institute for Public Policy Research, IPPR Commission on Economic Justice, Available Online: [https://www.ippr.org/research/publications/on-borrowed-time].

Figure 12. Political stability and absence of violence/terrorism before and after crash — annual averages

(higher scores are better)



Source: World Governance Indicators

Politically, even before the financial crash, the UK has been a highly volatile country. It has been on a downward trend in recent years. Before the financial crash, it appeared to be becoming more stable; however, the crash disrupted this and appeared to weaken its political coherence. The politics of all OECD countries was damaged by the financial crash. Yet, on average, OECD members have been on a steadier path and managed to maintain a higher level of political stability than the UK.

The UK and the financial crash

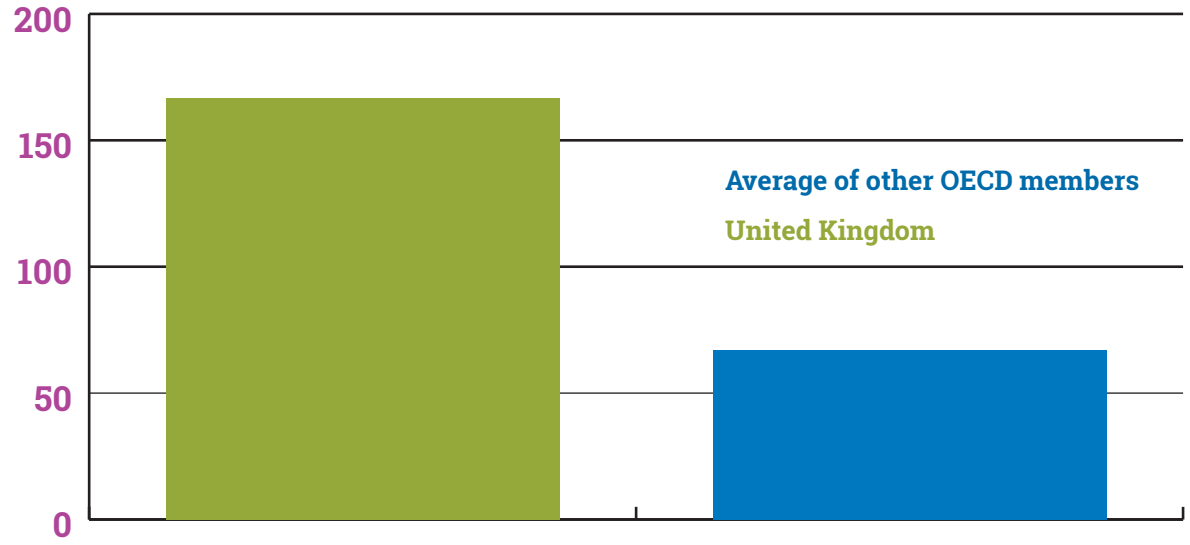
As can be seen from this collection of key statistics, the UK handled the financial crash and its aftermath in a less effective way than other OECD members. Even prior to this event, the UK appeared to be a weaker member of the OECD by many measures. This puts the UK's politics in perspective: the financial crisis and the UK state's inability to manage its consequences has created regional tensions within the state, threatening the integrity of the state and leading to events such as Brexit, which has further paralysed its political and economic performance.

The UK handled the financial crash and its aftermath in a less effective way than other OECD members.

The UK's response to the COVID-19 pandemic

The ongoing COVID-19 pandemic is another useful test to compare the different handling of crises. As seen in the table below, the most recent data on deaths due to the virus, relative to population, suggests that the UK has had more difficulty in containing and handling the crisis, on average, than other OECD states.

Figure 13. Total confirmed deaths due to COVID-19 per million people on April 14 2020.



Source: Roser, M., Ritchie, H. & Ortiz-Ospina, E.[14]

Despite having the advantage of witnessing the effects of the virus in other countries before the crisis reached the UK, effective and coherent responses from the UK state did not follow at an early stage. The strict measures taken by other countries were not replicated. Initially, the government resisted implementing quarantine and social distancing measures, with health experts labelling the UK as an "outlier globally in terms of its minimal social distancing population-level interventions".[15] UK government officials also initially advocated a "herd immunity" strategy – which would allow the virus to spread to a majority of the population.[16]

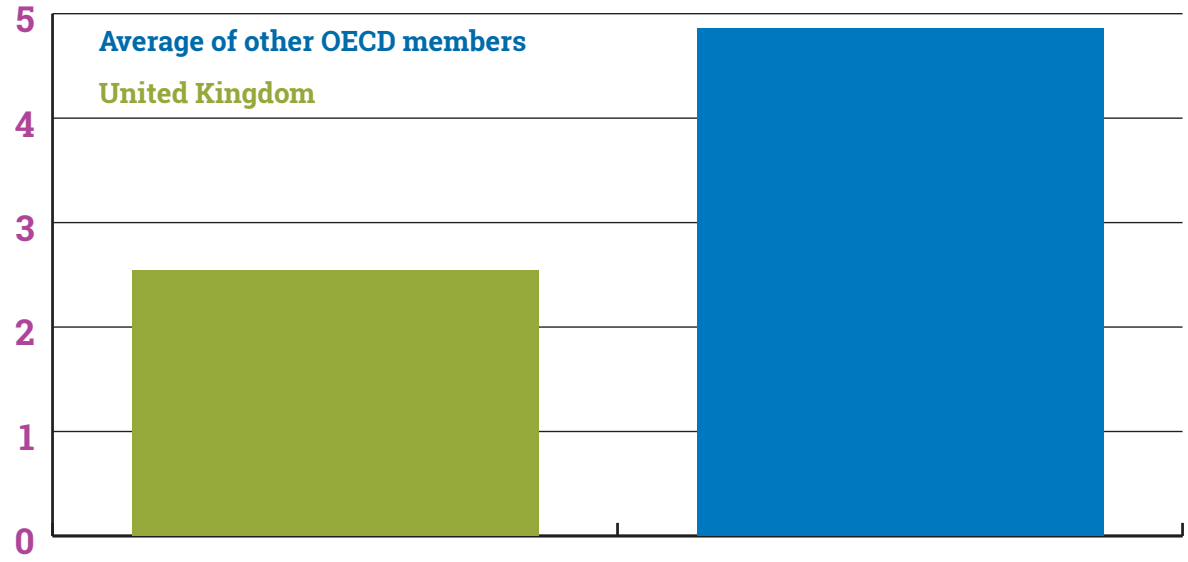
Eventually, the UK's policy shifted — albeit too late — to contain the spread of the virus. The extent and timeliness of the UK's policies to contain the virus did not reflect its level of preparedness to cope with it in terms of available resources. As the below figures illustrate, the UK had fewer available essential health resources than average in the OECD.

14 Roser, M., Ritchie, H. & Ortiz-Ospina, E. (2020) 'Coronavirus Disease (COVID-19) – Statistics and Research', Our World in Data, Available Online: [https://ourworldindata.org/coronavirus].

15 Alwan, N.A et al. (2020) 'Evidence Informing the UK's COVID-19 Public Health Response Must be Transparent', The Lancet, 395:10229, 1036-1037, Available Online: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30667-X/fulltext].

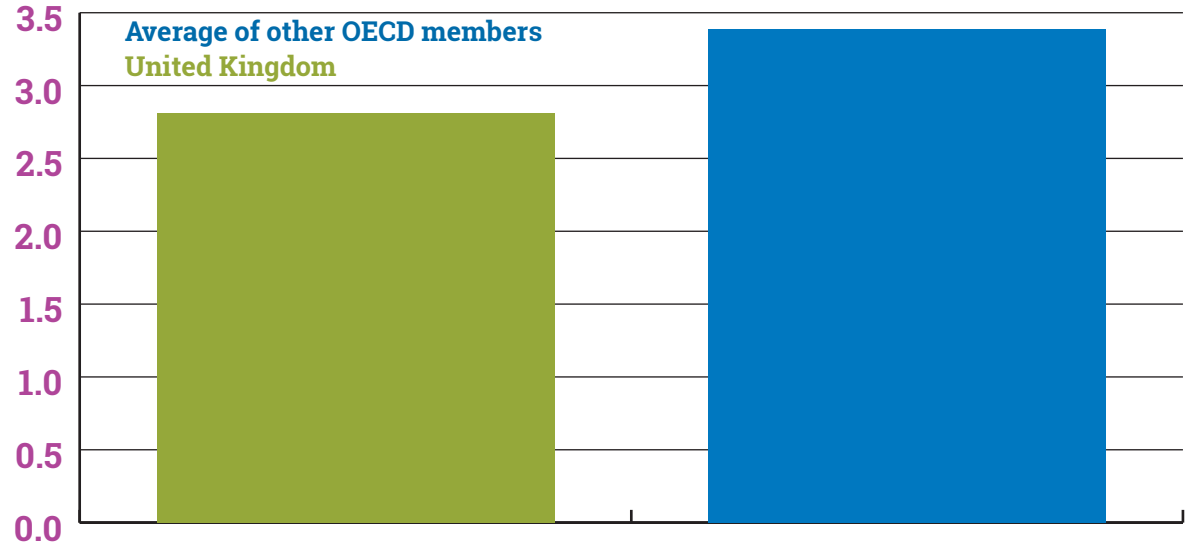
16 Conn, D. & Lewis, P. (2020) 'Documents Contradict UK Government Stance on COVID-19 'Herd Immunity', The Guardian, Available Online: [https://www.theguardian.com/world/2020/apr/12/documents-contradict-uk-government-stance-on-covid-19-herd-immunity].

Figure 14. Hospital beds per 1,000 people in 2017



Source: OECD[17]

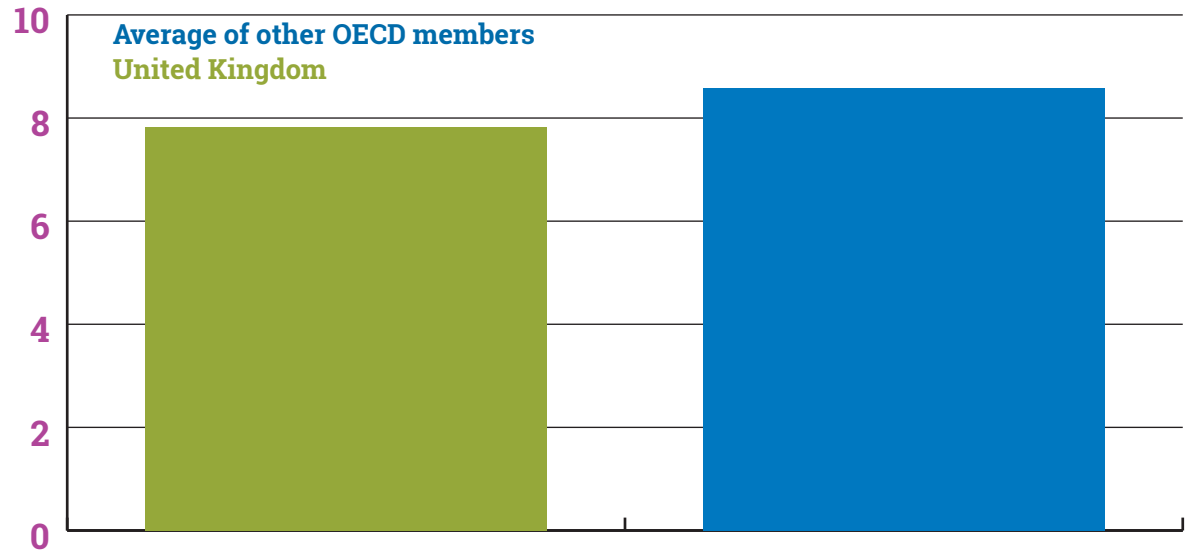
Figure 15. Doctors per 1,000 people in 2017



Source: OECD[18]

17 OECD (2020) 'Hospital Beds Data', Available Online: [https://data.oecd.org/healtheqt/hospital-beds.htm].
18 OECD (2020) 'Doctors Data', Available Online: [https://data.oecd.org/healthres/doctors.htm].

Figure 16. Nurses per 1,000 people in 2017



Source: OECD[19]

The UK and the COVID-19 pandemic

Ultimately, the analysis suggests that the UK's handling of this ongoing crisis has been a failure, particularly when compared to other OECD members, and further confirms some of the insights that our global risks data has provided.

The analysis suggests that the UK's handling of this ongoing crisis has been a failure.

19 OECD (2020) 'Nurses Data', Available Online: [https://data.oecd.org/healthres/nurses.htm#indicator-chart].

Assessment of the global situation

Globalisation has created many opportunities — but also many risks. Without calling for a reversal of globalisation, which would be to discount the great progress made, we must find a way to limit and mitigate shared risks within a global framework. It is crucial to identify how risk can be transferred through economic relationships, as well as who is most exposed and vulnerable to risks.

There have been rising levels of risk in recent years, to such an extent as to threaten the gains of globalisation. This insight is reflected in reality, as we have seen, for example, in crises ranging from the financial crash, to Brexit, to the China-US trade war, to Saudi-Iranian geopolitical competition and, fundamentally, the COVID-19 pandemic.

A key feature of many of these crises is the breakdown of multilateral cooperation between countries. As this report identifies, the interdependencies of modern states means that risks are shared between them. If this trend of decreased cooperation continues, leading to the dismantling of international institutions, forums and diplomatic networks, states will lose essential tools for preventing or tackling crises.

Strategy for the Scottish Government

In light of the findings presented in this report, we may draw the following conclusions and make several key policy recommendations for the Scottish Government to inform its global strategy.

1. The world is becoming more unstable and it is thus becoming increasingly critical that, to navigate the risks, their potential sources and size must be identified in advance.

2. In light of this, the Scottish Government must take steps to increase its preparedness and protect its interests by raising the quality of the data resources it possesses.

3. The Scottish Government should especially invest in producing comprehensive bilateral trade statistics, covering imports and exports in both good and services, for as many of Scotland's international partner countries as possible. Such a resource does not currently exist. Not only is this a disadvantage in terms of economic strategy, but it also leaves Scotland blind to any international risks it, in particular, may be exposed to, and thus limits the ability of public and private organisations to prepare for potential crises.

4. The Scottish Government should also work as much as possible to build independent, international political relationships parallel to its key economic partnerships. This will help to address crises as they emerge, as well as strengthen these economic ties and advance Scottish interests.

5. Being part of the UK, which is highly vulnerable to crises, the Scottish Government must also consider ways to protect Scotland against the high levels of risk it is thus likely exposed to as a UK nation. The Scottish Government should consider, for example, how it can increase its resources, crisis-fighting capacity, ability to interact politically with other countries, and local policy independence.

Appendix

Global Risks Index Comparisons in 2018 (Higher Scores are Better).

Country	Rank of 36	Index Value
Iceland	1	54
Latvia	2	53
Estonia	3	51
New Zealand	4	50
Slovenia	5	48
Finland	6	47
Norway	7	45
Lithuania	8	44
Luxembourg	9	42
Chile	10	41
Portugal	11	39
Sweden	12	38
Denmark	13	36
Greece	14	35
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