The State's role as a risk taker

Governments always and everywhere bear risk. But it is not always the case that they bear the right risks or do so in ways that are efficient. This note explores the role of the state as risk-taker and the valuable function it can play in filling insurance gaps. There may be good reasons for it to go further. New risks are emerging and government often ends up implicitly shouldering them. As we outline, mechanisms already exist that might guide policymakers in plugging gaps in the insurance market as effectively as possible.

The big risk-taker

It may be surprising to hear, but government is almost certainly the largest single risk-taker in society. Take a step back and think about some of the core functions of the state.

When the economy is in the doldrums, it is government that steps in to provide benefits to people who lose their jobs. The state acts in effect as an insurer paying out to anyone who becomes unemployed. Similarly, when we fall ill the government bears the direct costs of treatment in the form of universal health insurance that is the NHS.

There are many other, less salient examples of government acting to insure risks. Importantly, its methods of intervention vary, and it is worth exploring a few of the different approaches.

The risks of terrorism

The risks of terrorism are wide-ranging and in many cases very significant. At the extreme, an attack could involve the use of a chemical, biological, radiological or nuclear device. The potential losses from such major threats, and even from more 'conventional' terrorism, may ultimately rest with government.

In fact, government already supports the provision of terrorism insurance for commercial assets. It does so by guaranteeing an industry-owned mutual, called Pool Re, which takes on commercial terrorism risks from private insurers and charges a price for doing so. Pool Re assumes the risk, but if a claim were sufficiently large to exhaust its reserves then government would step in. Over £2trn of commercial assets are insured in this way in the UK.

This mechanism, one of the earliest of its kind, was developed in the 1990s as a response to IRA terrorism and the subsequent withdrawal of private insurers from the market. Pool Re has several virtues. It leverages the distribution networks of the private sector so that terrorism insurance is widely available to businesses. It directly prices the risk for those that buy it. Furthermore, Pool Re creates a buffer between the risk and the state with premiums being held in a fund until called upon. And those premiums can also be used to ensure government is compensated for the guarantee it extends.

Livestock in peril

Disease is a persistent threat to livestock farmers. There are many known diseases and the ever-present danger that new ones will emerge. As bovine TB or mad cow disease have illustrated, the costs to farmers can be onerous.

Government intervenes in this area too, but in a different, much more direct way. Farmers affected by official culls to control the spread of disease are entitled to compensation. The objective is to reimburse

them for the market value of the animals they lose. However, farmers are not required to pay for this form of insurance. Nor is the cover complete: the costs of disruption as well as consequential losses, such as from eggs that would have been laid, are excluded.

The mechanism could be said to explicitly recognise liabilities that government might have to meet anyway, especially if an outbreak was extensive and threatened the livelihood of many farmers.

Climate of risk

Natural disasters are commonly insured and reinsured. Large losses are covered in the case of floods, hurricanes, heatwaves and freezing weather. Recent hurricanes in America, for example, have resulted in billions of dollars in insured losses.

Climate change will potentially usher in far-reaching changes in this market. The magnitude of losses will undoubtedly expand with more frequent and severe weather events. Cover can and will still be provided, so long as insurers and reinsurers are confident enough that they can model the impact of global warming on expected losses.

But the cost of insurance will have to rise. Businesses may be able to cope with these additional costs, but the same may not be true of individuals. We already see evidence of people under-insured or unable to afford the cover.

In the UK this is most conspicuously the case with flood risk. A significant number of properties are especially prone to flooding, so much so that cover has been unaffordable to most homeowners or renters. Often this is because the properties are built on flood plains. The dangers to date are largely down to the pressure of urbanisation, but rising sea levels and the increased chances of severe storms from climate change mean more and more properties are very likely to be at risk in the coming decades.

The government's recent solution to the problem is Flood Re. The state does not directly provide insurance. Instead, it has raised a levy on property insurers, and hence on households, to build up a fund to offer affordable cover to the highest-risk properties built before January 2009. Thanks to this mechanism, any such homeowners in the UK can now affordably insure themselves against the risk of floods.

As extreme weather becomes more common, other risks are likely to emerge that pose similar challenges.

Take-away 1: rationale for intervention

There are a several take-aways from the three examples just outlined. The first is that government's motive for intervening to address these risks is more complex than many traditional economic arguments. Conventional analysis focuses on information problems that make it difficult to know what risks are being insured (adverse selection) or create perverse incentives for riskier behaviour (moral hazard).

These undoubtedly matter, but the risks we've discussed suggest other factors are also at play that make it hard for firms in competitive markets to develop adequate insurance capacity.

One factor is uncertainty, which makes it difficult to predict losses and to price them. Uncertainty can arise when the risk materialises only very rarely, meaning very little data is available, or when past events provide no pointers to future risks. Insurers might be willing to take on some uncertainty, for an additional price, but their appetite to do so may be well below what would be optimal for society.

Equally, the risks discussed are often large and correlated. Private insurers will have limits on how much exposure to any particular risk they are willing to bear. Very large risks may exhaust the capacity not only of individual insurers but the market as a whole.

These factors are especially pertinent when thinking about risks such as terrorism, but they may also apply to some extent to a range of other threats such as human pandemics, cyber-terrorism or animal diseases.

Finally, considerations of equity are crucial. In all of these cases there is a motivation to ensure that insurance is affordable. As a result, households at high risk of flooding can be covered, livestock

farmers can avoid bankruptcy and property owners in central London or other high risk locations can afford to buy terrorism insurance.

Take-away 2: types of intervention

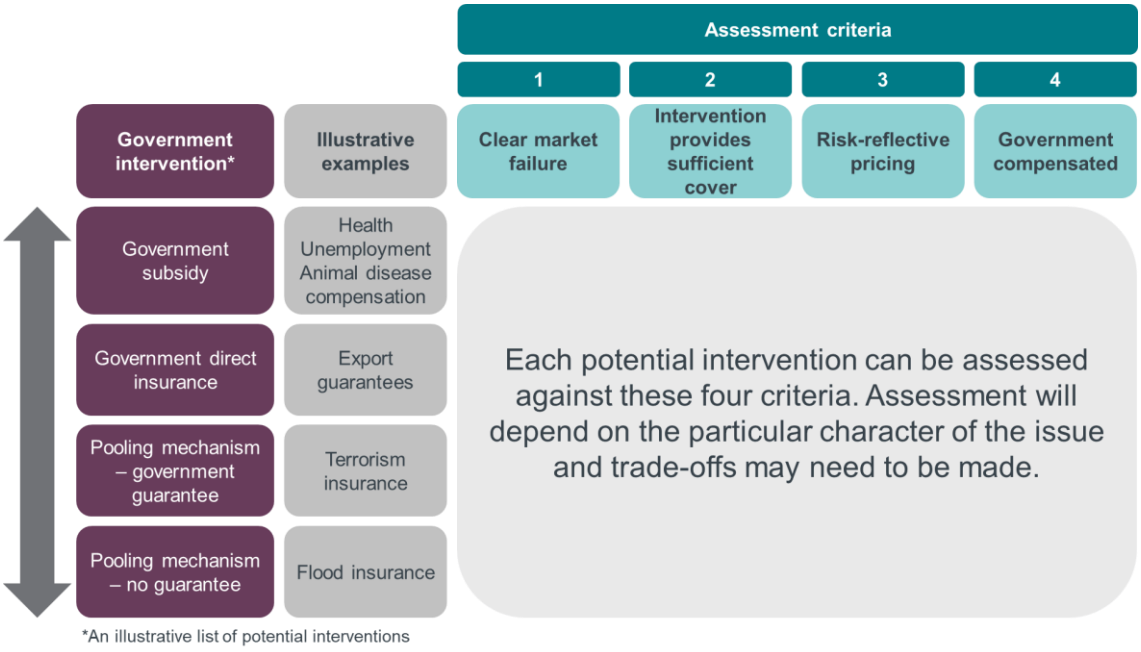
A second take-away is the sheer range of interventions. They can vary from a form of direct insurance (animal diseases) to a pooling mechanism guaranteed by government (terrorism insurance) to a pooling mechanism without a state guarantee (Flood Re).

The forms government involvement take can have very different implications for market efficiency. Assuming there is a strong case for government to step in, on grounds of equity or market failure, we can think of an efficient insurance market as one where:

- Sufficient cover is provided
- Pricing is risk-reflective, meaning that everyone should be better off buying the insurance rather than self-insuring
- Those being insured are incentivised to reduce their risk, or at least not increase it
- The degree of government intervention is fairly compensated

These criteria are summarised in Figure 1.

Figure1: The merits of government intervention and the form it takes should be systematically assessed



The extent to which different interventions meet these criteria will vary, depending in part on context. Some of these criteria may also have to be traded off against other government objectives, calling for careful consideration.

For example, the state's role in ensuring the availability of terrorism insurance goes a long way to meeting all the criteria required to achieve an efficient market. But this is less obvious in the case of animal diseases, where there is no price and incentives may be skewed to some extent. Clearly, this is not risk-reflective pricing, but the intervention could nevertheless be justified on the grounds of equity.

The same holds true, by design, for Flood Re. The scheme thus risks creating an incentive to build in high-risk flood areas, a drawback that has been mitigated by providing the subsidy only to properties built before January 2009.

Conclusions

Government involvement in risk is likely to increase in a world where potential society-wide perils like climate change are growing. Other risks may emerge that cannot be fully addressed by markets alone. In the process, it is likely that the vulnerable in society will need more support to cope. It is therefore increasingly imperative for the state to get its interventions right, assessing what models work best to deliver efficient, equitable outcomes.

The worst outcome is that these risks remain only implicitly with government. That creates extra uncertainty, leaves taxpayers footing the bill and probably means insufficient action is taken to mitigate the risks. Equally, when government does decide to step in, its method of intervention must be critically assessed to ensure it has chosen the best option.

We've set out a broad framework to think about how to address different risks. More work is needed to apply this approach to current and emerging risks so that government can use its balance sheet to intervene to maximum effect.

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