

Will swine flu push the world into deflation?

Key points

- This article looks at the economic impact of a global flu pandemic on the global and UK economy. Although, so far, the social and economic impacts have been very small, if infection rates were to rise much further, significant costs could be expected.
- A swine flu pandemic would affect the economy via supply and demand effects. On the supply side, infection and death imply that employees would be unable to go to work. Moreover, beside unavailability of staff, the impossibility to travel would impede the ability of companies to conduct business. On the demand side, fears of infection would keep people away from public spaces such as airports, train stations, restaurants, cinemas and shopping centres. This would imply cuts in travel and tourism and consumer spending. In addition, uncertainty about the impact and duration of the pandemic would deter companies from investing. Finally, financial markets would probably experience renewed tensions with spreads between policy and market interest rates rising again and share prices negatively affected.
- Based on the experience of previous pandemics and developments so far, we assume that 30% of the world and UK population would be infected. We also assume a death rate of 0.4%. In addition, we look at the experience of the SARS outbreak in Asia in 2003 to calibrate the likely cuts in discretionary consumption and international travel. This episode shows significant reductions, of around 20% and 60% respectively. In the current environment of rising unemployment and needs of balance sheet repairs, households may cut discretionary consumption even more sharply.
- Under these assumptions, the GDP loss during the six months of the pandemic would amount to around 5% in the UK. Although, once the pandemic is over, the economic bounce back would likely be less sharp than post-SARS, chances are that, by 2011, GDP growth could be above our baseline forecast and the economic loss would be gradually recouped within around 3-4 years. CPI inflation would likely turn negative for a few months but would rise back as pent-up demand is realised.
- But there is a risk that swine flu tips the UK and the world economy into deflation. This is because the pandemic would hit at a time when businesses and banks are still reeling from the economic crisis. Rather than catching up on postponed spending, households may raise savings for a longer time. In addition, companies that are already fragile after the recession may succumb to this new shock. We estimate that under such a scenario the UK and world economies would fall into deflation. UK CPI inflation would fall to around -1% throughout 2010-12 and UK GDP growth next year could be as low as -7½%.

Introduction

Health experts worldwide agree that, while the current flu epidemic that started in Mexico in April 2009 has so far affected far fewer people than normal influenza, there is no room for complacency. So far, the social and economic impacts have been very small. But if infection rates were to rise much further, significant costs could be expected. In the UK, health authorities have admitted that contagion is out of control. The Health Secretary made the alarming statement that there could be 100,000 new cases a day by the end of August.

Beside the assessment of the likelihood of a severe pandemic breaking out which relates to medical and health policy factors, it is useful to evaluate the possible economic impact, should a pandemic occur. Using historical benchmarks of previous flu pandemics and of the SARS episode, we have estimated the economic impact of a global flu pandemic on the world economy in general and the UK in particular.

This article looks at the economic impact of a global flu pandemic that would break out in the last quarter of this year and last six months. We start by explaining what economic channels would be at play. We then highlight the set of assumptions that need to be made to quantify the economic impact. In our scenarios, we base these assumptions on previous experience of pandemics.

Economic channels

A swine flu pandemic would affect the economy via supply and demand effects. On the supply side, infection and death imply that employees would be unable to go to work. Moreover, beside unavailability of staff, the impossibility to travel would impede the ability of companies to conduct business.

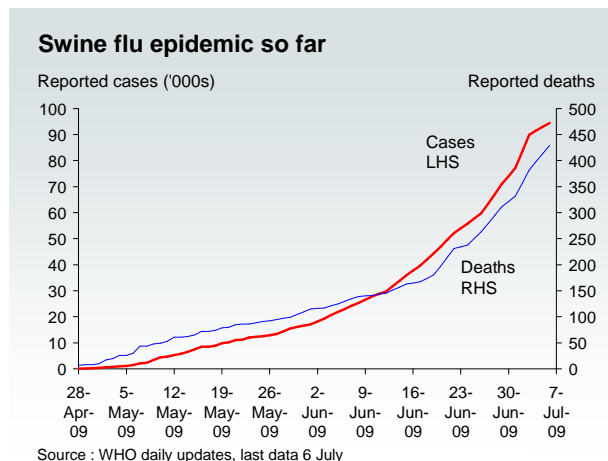
On the demand side, fears of infection would keep people away from public spaces such as airports, train stations, restaurants, cinemas and shopping centres. This would imply cuts in international and domestic travel and tourism and discretionary consumer spending. In addition, uncertainty about the impact and duration of the pandemic would deter companies to invest. Finally, financial markets would probably experience renewed tensions with spreads between policy and market interest rates rising again and share prices negatively affected.

Benchmarking the economic costs on past pandemic experience

This analysis of the relevant economic channels implies that the economic costs of a pandemic essentially depend on two sets of factors: infection and death rates on the one hand and the response of consumers and companies to the risk of infection on the other.

As of 6th July, there have been 94,512 cases reported worldwide and 429 deaths. In the UK, there have been 7,447 cases reported and 3 deaths. This makes this epidemic much smaller than normal influenza. Every year, according to the WHO, between 3 and 5 million people are infected by seasonal influenza with 250,000 to 500,000 deaths.

We base our analysis on previous flu pandemics, notably the 1957 "Asian flu" and the 1968 "Hong-Kong flu". In the former, the estimated infection rate was 40-50%; in the latter it was 10-30%. We assume worldwide infection rates at 30%. The UK's Chief Medical Officer



has mentioned the possibility of even higher infection rates, at 50%. We assume that each infected person (or carer for an infected child or elderly) is absent from work for two weeks. As regards death rates, in both previous pandemics, they are estimated to have been around or less than 0.2%. So far, the death rate in this pandemic has been around 0.4%. We retain this rate as an assumption.

As regards the likely response of consumers and companies to the risk of infection, the two previous flu pandemics are too old to be relevant (and the data would be hard to come by). A more relevant experience is that of the SARS outbreak in Asia in 2003. At the time, international travel to and from Asian countries collapsed. For instance, foreign tourist arrivals to Hong Kong decreased by around 60% during the SARS outbreak in 2003Q2, despite relatively low infection rates. We assume that travel and tourism falls by 60% for two quarters and recovers gradually over the following year. This would represent a slower recovery than post-SARS which seems plausible given the more global nature of the pandemic and the weaker starting point for travel and tourism. Different countries have very different exposures to travel and tourism as shown in the table below. The size of the shock relative to each country's economy therefore varies. In this respect, the UK would be relatively less affected than other countries. For instance, travel and tourism account for only 16.1% of UK services exports, compared to more than 70% for France, more than 40% for Italy and 20% for Germany.

Tourism Intensity (2008): Selected		
Country	T&T related service exports as % of total	T&T related service imports as % of total
UK	16.1	42.7
Germany	22.4	38.2
France	71.7	48.7
Italy	42.5	28.3
US	27.9	28.8
Japan	11.6	28.5
China	33.7	26.1

Source: Oxford Economics, WTTC

As regards consumer spending, discretionary spending accounts for around 40% of private consumption in the UK, like in other countries. By how much discretionary consumption is cut essentially depends on fear, which will likely be influenced by infection and death rates but also by media coverage and other possibly less-than-rational factors. During the SARS outbreak, private consumption fell sharply in the countries affected as consumers cut non-essential spending to avoid infection. Based on this experience, it is reasonable to expect cuts in discretionary consumer spending of around 30%. Some of these cuts would correspond to mere postponements. Post-SARS consumption bounced back very rapidly in Asia. However, in the current environment of weak growth and rising unemployment and the need for households to repair their balance sheets, a rather more muted rebound seems more likely. Therefore, it seems reasonable to assume that some of the money saved on spending cuts is temporarily saved and consumed in later periods.

The fact that the pandemic would strike at a time when financial markets are still reeling from the credit crunch could mean that risk premia rise across the board. We assume that the spread between market rates and policy rates widens by 100bp in the first two quarters of the pandemic, on all major markets, which is similar to what was observed at the end of last year and the beginning of this year.

Beyond the dampening impact of slower activity and higher interest rates, investment is also likely to be

postponed while the economic impact of the pandemic is uncertain. The calibration of this shock is more difficult. The SARS episode shows no clear and consistent fall in investment in the affected countries, probably because infection rates were low and the disease soon appeared to be contained. We assume a small shock to investment. If anything, risks are that investment falls by a larger amount. Risk aversion is also likely to drive equity prices down, by more than would be consistent with revisions to the growth outlook. Our model suggests that in this scenario equity prices would fall by 40% over a year. The shock is likely to be more abrupt. We impose this 40% shock over two quarters, i.e. 20% per quarter for two quarters.

No room for policy to buffer the impact

Supply disruptions could cause a rise in inflation. However, the Bank of England and other central banks would recognise this as a temporary shock and would therefore not raise interest rates. On the contrary, in principle, temporarily lower rates would be appropriate to allow for an increased demand for liquidity and alleviate the demand shock. In the UK and other major economies however, policy rates are very close to the lower bound, leaving no room to lower them further.

Room for supportive fiscal policy is also limited in the UK even more so than in most other countries. In addition, given the lags involved, fiscal outlays would probably only reach the economy once the pandemic is over. We therefore assume no additional package and only let the automatic stabilisers play.

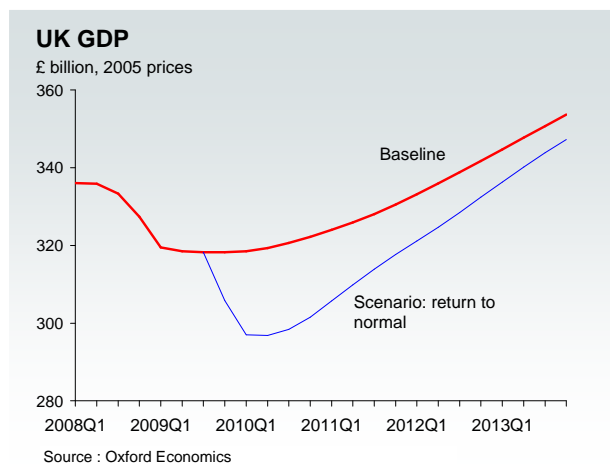
Economic cost during the pandemic...

Under these assumptions, the GDP loss during the six months of the pandemic would amount to around 5% in the UK. Although the pandemic is assumed to start only in the last quarter of the year, average growth in 2009 would be down by 1 pt, to -5.4%. The impact on the UK is slightly smaller than for other major economies like the Eurozone, due to a lesser net exposure to international travel.

... and beyond

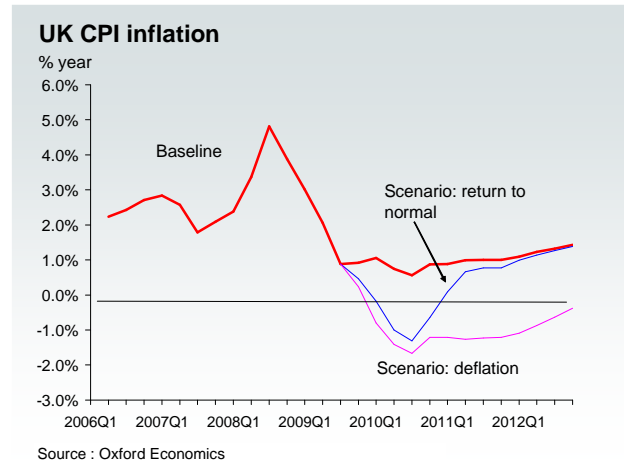
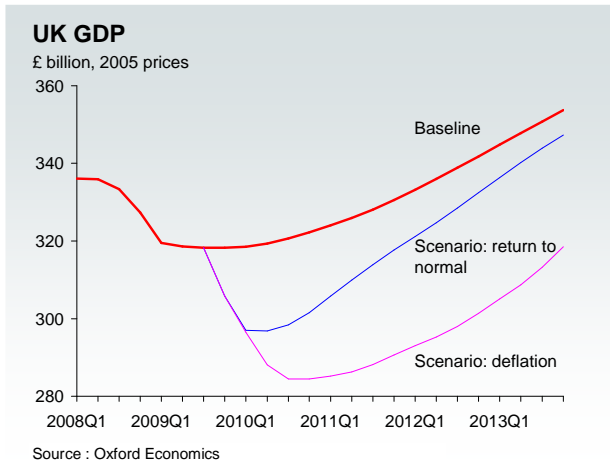
Possibly more important than what happens during the pandemic is what happens afterwards, in other words how the UK economy bounces back from it...or not. The SARS economic shock proved short-lived. Asian economies were growing very strongly when SARS broke out. As soon as the epidemic was perceived to be under control, consumption resumed and very strong growth returned. This time around, such a sharp rebound is unlikely. GDP would likely remain below the baseline for some time. However, by 2011, GDP growth could be above our baseline forecast and the economic loss would be gradually recouped within around 3-4 years. CPI inflation would likely turn negative for a few months but would rise back as pent-up demand is realised.

But there is a risk that swine flu tips the UK and the world economy into deflation. This is because the pandemic would hit at a time when businesses and banks are still reeling from the economic crisis. Rather than catching up on postponed spending, households may raise savings for a longer time. The fact that UK households' balance sheets are more stretched than in many other countries makes the risk of deflationary dynamics larger than elsewhere. In addition, companies that are already fragile after the recession may succumb to this new shock. The fact that the pandemic would occur around Christmas when a lot of discretionary spending takes place heightens the likelihood of such a scenario unfolding. In this case, consumer spending would remain lower for longer as households prefer to keep higher savings rates. Travel



and tourism would remain depressed for longer. As unemployment rates keep rising well past previous peaks, downward pressure on wages would build. And financial markets would experience another bout of protracted malfunctioning.

We estimate that under such a scenario the UK and world economies would fall into deflation. UK CPI inflation would fall to around -1% throughout 2010-12 and UK GDP growth next year could be as low as -7½%.



Conclusion

As a conclusion, while the UK economy should in principle be able to cope with a swine flu pandemic, there is a significant risk that the pandemic triggers a set of unfavourable behavioural changes that tip it into deflation. A flu outbreak in the autumn would hit just as the economy starts to recover from the credit crunch. It would threaten already fragile businesses and put further strains on financial markets and fiscal balances. This could generate a vicious cycle that postpones the recovery for another couple of years. The fact that UK households' balance sheets are more stretched than in many other countries makes the risk of deflationary dynamics larger than elsewhere.