in helping members prepare their economic and financial systems for the possibility of an avian flu pandemic. The policy recommendations in this area focus on the need to mitigate risks that might arise in a severe pandemic with high absenteeism, even though some commentators consider that the most probable scenario would feature significantly less economic dislocation. In a less severe pandemic, many of the same issues seem likely to arise, albeit at a lower intensity. Attached to the note is a distillation of what is emerging as the common elements of business continuity planning in the financial sector for pandemic risks. This document will be updated on a periodic basis. Nevertheless, Executive Directors are encouraged to share this draft with their capitals as soon as possible. The appendix provides a collection of information that can be found on the global web on avian flu.

II. Potential Global Economic and Financial Impact

5. **If the pandemic is severe, the economic impact is likely to be significant, though predictions are subject to a high degree of uncertainty**. The severity of a pandemic will, inter alia, depend on its attack and fatality rates,[4] its duration, and the behavior and preparedness of households and firms, as well as the capacity and preparedness of health care systems. A pandemic similar to the 1918 Spanish flu could result in high levels of illness and death, and a sharp but only temporary decline in global economic activity (Box 1). Economic disruptions on the supply side would come directly from high absenteeism, as people may be asked to stay at home, or may choose to do so to care for sick relatives or because of fear of being exposed themselves. There may also be disruptions to transportation, trade, payment systems, and major utilities, exposing some financially vulnerable enterprises to the risk of bankruptcy. Moreover, demand could contract sharply, with consumer spending falling and investment being put on hold. Financial repercussions could further exacerbate the economic impact.

6. **Once the pandemic has run its course, economic activity should recover relatively quickly**. Both consumption and average hours worked might even overshoot the pre-pandemic level temporarily. The pace of the recovery would depend, inter alia, upon business and consumer confidence, the speed of resumption of international trade, and the recovery of asset values. Countries with weak fiscal and health systems are likely to be more exposed and more severely affected, as they lack the financial resources and the capacity to purchase and distribute drugs and vaccines, treat victims in a timely manner, and provide for health security measures.

7. **While it is most likely that a pandemic will be followed by a rapid recovery, resulting in limited overall economic effects, it is possible that a severe pandemic will have a more disruptive impact.** In such a scenario, worldwide current account effects would necessarily balance, but open economies could be more vulnerable to a deterioration in their current account balances. Tourism could drop sharply due to fear of infection and possible travel restrictions, and may be slow to recover. Other exports could suffer from trade and

[4] The attack rate is the percent of the population that falls ill with the virus; the fatality rate is the percentage of those falling ill that die from the virus.

transportation restrictions—imposed to control the spread of the virus—as well as from lower global demand and domestic supply disruptions. If two-way trade flows are not restricted, imports in some countries may rise on account of higher need for medical goods and services, although this may be offset by sharply lower domestic demand and production. Low-income countries could see a deterioration in their trade balance owing to high health-related imports, but if financed through external grants this would not increase their debt burden.

Box 1. The 1918 Spanish Flu

The Spanish flu of 1918-19 was by far the most lethal influenza pandemic of the 20th century. According to WHO estimates, it infected about one-quarter of the global population and took the lives of more than 40 million people—about 2 percent of the global population at the time, and more people than died in WWI. This renders the Spanish flu the third most deadly pandemic on record, surpassed only by the plague pandemics of the 6th and 14th centuries. One unusual feature of the Spanish flu was that it killed not only the very young and the very old, but also adults in the prime years with above-average frequency.

Despite its name, the first outbreak of Spanish flu was recorded in early 1918 in army camps in the United States. The Spanish flu came in three waves, with the second wave—beginning in August 1918 simultaneously in France; Sierra Leone; and United States—being the most deadly. Fatality rates varied greatly between countries, ranging from an estimated 0.5 percent of the population in the United States (equivalent to about 600,000 deaths) to about 5 percent in India and 20 percent in some Pacific islands, such as Fiji or Western Samoa.

Information on the economic impact of the Spanish flu is limited. This is, in part, because the epidemic broke out during WWI when most governments restricted the flow of information, but also because national income accounting was in its infancy at the time. According to data available for the United States, both industrial production and the business activity index dipped at the height of the epidemic in October 1918. However, according to a recent study by the Canadian Department of Finance these declines point to an annual output loss of only 0.4 percent. Other indicators point to temporary and modest reductions in passenger rail transport and retail sales.

While these estimates suggest a surprisingly modest economic impact, it appears unlikely that a similar outbreak today would have comparably limited effects. The Spanish flu struck when the U.S. economy was on a war footing. There may have been considerable social pressure on workers to stay at work, and the lack of a formal safety net may have threatened workers with high financial costs in case of absenteeism from the workplace.

One study dating from the 1960s for another country, India, finds that agricultural output declined by over 3 percent.[1] However, this comparatively large impact may reflect the heavy toll of the pandemic on the agricultural workforce, of which some 8 percent are estimated to have succumbed to illness. Both estimates are subject to large margins of error.

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[1] Theodore Schultz, 1964, "Transforming Traditional Agriculture" (New Haven, Yale University Press).

8. **A severe pandemic could pose risks to the global financial system**. Some temporary increase in risk aversion is highly likely, which would lead to a corresponding surge in demand for liquidity, specifically for cash, and for low-risk assets. This "flight to quality" would lead to at least temporary declines in asset prices and widening of credit spreads, for both corporations and emerging markets. Commodity prices could be expected to decline reflecting weaker aggregate demand, but this may be offset by potential supply disruptions for key commodities such as oil. Although these effects are likely to be temporary, asset price declines could put the balance sheets of some financial institutions

under stress and they may face challenges in meeting regulatory norms. Market operations could become more disorderly in the case of a breakdown in the trading infrastructure, leading to limited or intermittent trading.

9. **A severe pandemic may also lead to a significant but temporary reduction in net capital flows to emerging markets.** Some capital flight from residents seeking safe havens could be expected. Based on the SARS experience, foreign direct investment plans may change little, although major investments may be postponed. At the same time, a shift in risk preferences could lead to modest portfolio outflows, particularly from those members where equities are relatively highly priced, or with weaker public finances, or with current accounts highly dependent on commodity prices and export of services. To varying degrees, members would be able to address temporary balance of payments pressures in some countries by drawing on reserves—which for many countries are at a historical high. However, net flows to emerging market countries might decline as a result of some combination of possible operational disruptions in the financial systems, a loss of confidence in more vulnerable countries, and abrupt shifts in risk preferences. The possibility of severe balance of payments pressures under an adverse scenario cannot be precluded. It is important to note, however, that even severe disruptions to the financial system caused by uncontrollable events would not necessarily lead to loss in confidence if governments were seen to be dealing effectively with the emergency.

10. **Aside from sharp changes in asset prices, operational risks constitute the greatest challenge to the global financial system in the event of a severe pandemic**. Although it is uncertain how much absenteeism a pandemic would cause, high absentee rates without adequate contingency plans in place could result in disruptions of critical functions and services of the financial system, including payments, clearing and settlement, and trading. Financial systems' information technology and communication infrastructures might also be affected. Operational disruptions could prevent transactions from being completed and obligations from being met. Moreover, disruptions in one jurisdiction could spill over into other jurisdictions.

11. **As noted above, in the event of a less severe pandemic, similar issues would arise, but with less intensity.** Precision is difficult in this area, on account of the uncertainties concerning the links between the severity of pandemics and the magnitude of their economic effects.

III. Public Policy Issues and the Role of the Fund

12. **The need to help prepare for a pandemic is becoming an important focus for many governments and international organizations, including the Fund**. At the Beijing International Conference, US$1.9 billion was pledged to support efforts at all levels to help fight avian flu and prepare for a possible human flu pandemic. The World Bank, the World Health Organization, the Food and Agriculture Organization, and the World Organization for Animal Health are taking the lead in preparing a global coordinated response strategy on the possibility of an avian flu crisis, and helping members improve surveillance and control