

**Talk given by Andrew Farlow¹ at the launch of the first G-FINDER²
(Global Funding of Innovation for Neglected Diseases) report**

“Financial Meltdown and Neglected Diseases: Who will pay the price?”

**Royal College of Physicians
London
4th February 2009**

Mary has asked me to reflect on the global financial and economic crisis and its implications for funding into neglected disease R&D. They do say that economics is the dismal science – not something I obviously agree with, but if we go with the fiction for a moment, one might say that economists have recently been having something of a field day. If not the dismal weather...then for sure the dismal global economic climate!

There has been a veritable blizzard of bad news just recently.³ The IMF recently concluded that the world will grow at its lowest levels since the Second World War and global trade will fall for the first time since 1982. It predicts the UK economy will shrink by about 2.8% in 2009. The flip side to these growth and trade figures is rising unemployment. Just for unemployment to stand still needs a certain degree of economic growth per year. It is reckoned that for China it is about 10% and for the UK and the US several percentage points. A few days ago, in the UK, the Chartered Institute of Purchasing and Supply Managers predicted that UK unemployment would rise above 3 million for the first time since the 1980s. The US has lost nearly that many jobs just since December 2007. The International Labour Organisation predicts 50m job losses globally.

As well as the obvious problems from escalating unemployment, one needs to layer on top the social and political ramifications – and the reprioritizations amongst political leaders that this will engender. Without regular and persistent prodding, politicians’ minds, and that of the electorate about whom they most worry for their survival, will be on many things other than neglected disease R&D.

After the tide eventually turns on unemployment, there will be long-term fiscal implications that will impact all, including those working on neglected disease R&D.

¹ Research Fellow in Economics, Oriel College and Department of Economics, University of Oxford. Further copies and related thinking at <http://www.economics.ox.ac.uk/members/andrew.farlow>.

² <http://www.thegeorgeinstitute.org/iih/research/health-policy/current-projects/g-find-global-funding-of-innovation-for-neglected-diseases.cfm>. See also Moran M, Guzman J, Ropars AL, McDonald A, Jameson N, et al. (2009) ‘Neglected disease research and development: how much are we really spending?’ PLoS Med 6(2): e1000030, <http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.1000030>.

³ Apologies for being corny, but in the days before the launch the UK had suffered its worst snowfalls in nearly 20 years and most of London had ground to a halt!

In the past year, global flows into bank rescue packages have topped a couple of trillion dollars, and fiscal stimulus packages have been of a similar order of magnitude. It makes the \$2.5bn per year in the G-FINDER report seem a rather paltry sum.

It is hard to judge how many of the billions and trillions are, per se, ‘money spent’ that will have to be repaid – by taxpayers – in the future.

On the bank rescue side, a proportion of this figure is to prop up banks’ capital positions to prevent even worse collapse, and to insure the system – such that when we are through the crisis, a chunk of this can be repaid (and taxpayers may even benefit from some of the equity stakes they hold in banks). A proportion of it will be lost, as a proportion of bad loans gets offloaded on to taxpayers.

On the fiscal stimulus side, the good news is that economies are not like individual households. The ‘Micawber Principle’⁴ of household finances – “Annual income twenty pounds, annual expenditure nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pound ought and six, result misery” – does not apply to whole economies. To the extent that fiscal stimulus generates real economic activity that would otherwise not take place and be ‘lost for ever’ as it were, there is gain (with a proportion paid for by future taxpayers⁵). To the extent that resources are wasted on poorly designed fiscal stimulus, there is an inefficient fiscal drag on future generations.

The exact balance of all of this is hard to know. We do know that for an economy like the UK, even if the package of measures does ‘work’, future taxpayers will have to make good on large amounts of government borrowing and have to consume less, and the government will have to trim spending and consume less. It is a good thing we were asked not to bring in PowerPoints. The bar graphs for all of this make for pretty unpleasant viewing.

It is maybe a bit of an understatement to say that the information in this report is therefore timely, and today’s discussion at a critical juncture.

The flier for today’s meeting prompted me to think about issues raised by the recent financial and economic crisis that have some possible resonance with neglected disease R&D financing.

First, the issue of **optimality**. A few years ago there was a debate about whether *levels* of borrowing, and of asset prices (for example house prices) were optimal or not, and whether or not *patterns* (across generations and strata of society within countries, and across countries) had got a bit unbalanced. We learnt to our cost that, respectively, they *were* not and they *had*.

As the G-FINDER report identifies, the optimal level and distribution of neglected disease R&D funding – as the report puts it, so that “all diseases receive the attention that

⁴ Wilkins Micawber, from Charles Dickens, David Copperfield.

⁵ It depends on the ‘multiplier effect’ and how much tax revenue is generated by the activity stimulated.

they deserve” – and hence the extent of *total* underfunding and underfunding *by area*, is hard to read just from raw numbers of, say, DALYs⁶.

The overall optimal *level* we can probably confidently speculate is a great deal higher than current levels.

The ‘optimal’ *distribution* is a complex calculation involving components like burden of disease (and hence impact of an intervention, often as it interacts with other interventions over time), a whole range of cost issues, risk/time discounting (for example, this requires a handle on probable arrival times of interventions according to level of investment, and so forth), an understanding of the state of the science, how much can be leveraged from private sector activity and how much non-monetized inputs contribute (such as IP that itself has to be developed), how *lumpy* grants generate *flows* of R&D, how support for R&D comes through product purchase (maybe including also the role of emerging economy markets and tiered pricing mechanisms), adjustment of figures for Purchasing Power Parity and so forth.

And it is also not just about sheer sums of money involved, it is also about efficiency and governance issues to squeeze the most out of what is put in. Efficiency now matters more than ever.

This is an informationally demanding exercise. The G-FINDER report fills in an important part of this puzzle, but what the supposedly optimal level and distribution is is part of a bigger debate the report opens out, involving many stakeholders.

For example, the report indicates that 80% of public funding was allocated to AIDS, TB and malaria, while high-burden, high-mortality diseases such as pneumonia/meningitis, diarrhoeal illnesses and helminth infections together took 5.2% of global public funding, and there was more limited funding into diagnostics, paediatric HIV formulations and fixed dose ARV combinations, and platform technologies such as adjuvants and new delivery technologies. The degree to which this distribution is, or falls short of, optimal – and how it comes to be so and how it may be changed – is of course related to another question for discussion today: Who guides the priorities that generate such patterns?

Second, diversification. Looking through the report, one sees a continuing high reliance on certain key funders – with, notably, the US government accounting for 75% of global public spending, and two organizations, the NIH and the Bill and Melinda Gates Foundation making up nearly 60% of the total. Economists would say that this funding portfolio doesn’t look particularly well diversified.

⁶ Disability-Adjusted Life Year. A unit for measuring both the global burden of disease and the effectiveness of health interventions, as indicated by reductions in the disease burden. It is calculated as the present value of the future years of disability-free life that are lost as the result of the premature deaths or cases of disability occurring in a particular year.

http://www.who.int/healthinfo/global_burden_disease/en/index.html

There is an interesting further twist to this lack of diversification. Part of the financial crisis story is about a set of persistent global imbalances, especially of government budget and balance of payments deficit and surplus countries. To give just a flavor: China has been running a balance of payments surplus of several hundred billion dollars a year and parking most of its new reserves – eventually summing to nearly \$2 trillion at the end of 2008 – in low-paying US government debt and risking a large capital loss on it into the bargain should exchange rates finally give up the strain. Meanwhile, the US has been building up ever larger deficits and long term financial obligations.

The report mirrors this by showing how funding into neglected disease R&D has largely been from countries running budget and balance of payments deficits. And indeed, efforts to pull in further funding have often been pitched at deficit countries. It will be interesting to see future reports when some of the big ‘surplus countries’ like China (and Russia, though getting less so, and Middle Eastern countries?) are included, and also interesting to capture public and private sector funders in IDCs⁷ – currently representing only about 1% of the total spend in the report⁸ – (especially India, also China, Cuba, and Latin American countries) and in other Low- and Middle-Income Countries.

Third, sustainability. Even just a few years ago, there was lots and lots of apparent long-term liquidity in the global financial system. But it was deceptive. It was not sustainable. It had roots partly in lax policies and coordination failures (arguably, excessively low central bank interest rates in certain key countries, regulatory failure, global imbalances of various sorts, and so on) and it had ‘bubble-like’ elements. A running theme in some of my global health-related commentary in recent years has really, ultimately, been about financial sustainability, in part because of nagging suspicions that when available funds were expanding we were not being as vigilant as we could have been in judging things and too quickly pushing to lock some things in that would lock some things out when times got tougher. Sadly, funding in to this sort of R&D activity is procyclical and in the good times we need to be mindful of the bad times.

Fourth, ‘innovative finance’. Financial innovation can make for efficiency. It is what financial markets do *par excellence* when they are working at their best. But, we learned from the crisis that to the extent that those involved in it don’t fully understand it, certain kinds of innovation can distort and destabilize. In spite of billions of dollars involved, there was at times a worrying tendency not to fully stress-test ‘innovative’ new financial tools at relatively small cost compared to the potential benefits and losses involved.

It is clear that the appetite for new global health R&D financing mechanisms and general use of global capital markets for this purpose will be more challenging than it has been, and the need to stress-test as important as ever.

Fifth, for lack of a better word, protectionism (much in the news at the moment). Many of the global health mechanisms and organizations created over the last five to ten years

⁷ Innovative Developing Countries.

⁸ During Q&A Mary explained that this was partly a function of response rates of IDCs to study questionnaires. Reports in future years will capture more of the IDC contribution.

will need replenishing over the coming years (e.g. PEPFAR, GAVI), some will be seeking the levels needed for Phase III trials, while other initiatives have locked in legislation committing flows of funds. And a range of initiatives are gearing up for the long, hard, and often low-heroic, slog of achieving better delivery with innovations that come out of this R&D investment. And this is not to mention the many initiatives in building capacity in health systems in developing countries and the needs of non-health development assistance at a time when the poorest countries of all find it hardest of all to tap financial markets to run countercyclical fiscal policies.

Just as countries can act in ways that are beneficial for themselves to the detriment of all – what economists call ‘beggar thy neighbour’ trade and employment policies – we need to watch for similar pressures, built on real struggles, when different global health and global development initiatives feel the financial pressure.

Finally, let’s call it the ‘**silver lining**’ view of the world. Some of the recent fiscal stimulus discussion (in the US in particular) has concentrated on the notion that if government must put taxpayers money into spending for spending’s sake to stimulate the economy, at least it should be into programs, such as new environmental technologies, with very long-term payoffs, that would otherwise not get funded at such levels. Surely, a similar argument applies to R&D into neglected diseases, and the next stage for the results of reports like this is to somehow use them to help boost the profile of neglected disease R&D as an investment that is not a drain on current resources but one that – only if wisely and efficiently executed – has excellent long-term payoffs.