

A question of balance

The turmoil in the financial markets could lead to severe cost-cutting by governments, but US politicians would do well to note the benefits of continued support for clean energy and climate policies.

As *Nature* went to press, a US\$700-billion rescue plan for the collapsing financial sector remained in limbo in the US Congress. Some such deal may yet be passed. If it is, it still may not be enough to stop the global economy from sliding into recession. Faced with the prospect of fresh outlays and declining revenue, the US government may soon be looking for ways to tighten its belt, a situation likely to be echoed in Europe and beyond. For science and technology, this could mean less money for basic research, education and clean energy, and could pose fresh threats to the long-promised climate legislation in the United States.

Those who favour cutbacks — or, in the case of climate regulations, not moving forward — will say such activities cannot be afforded. In some cases, they may well be right; scientists may have to gird themselves for flat budgets into the foreseeable future, and set their priorities accordingly. But there is a danger that the debate will be framed entirely in terms of costs, with no consideration of the benefits. Investment in areas such as research, education and clean energy are part of the foundations for long-term prosperity.

The good news in the United States is that both leading presidential candidates have made this connection, especially in the energy and climate arena. Neither the Republican candidate John McCain nor the Democratic candidate Barack Obama is selling climate regulation as an expensive moral obligation to the environment. Instead, both speak of the benefits of 'green-collar' jobs and energy security.

There are concerns that McCain might succumb to pressure from the far-right of his party and back away from his pledge to curb greenhouse-gas emissions through a cap-and-trade programme. But he has yet to do so. His advisers continue to advocate hybrid vehicles, for instance, as both a cheaper and cleaner alternative to the internal combustion engine and a way to make the United States less dependent on increasingly expensive foreign oil.

Obama has gone further, integrating energy and climate policy with his plan for revitalizing the US economy. He argues that green jobs tend to be domestic jobs, which means energy security goes hand-in-hand with economic development. This might be

dismissed as overly optimistic, given that the transition to clean energy won't be cheap, but there is little doubt that new industries will eventually rise in place of the old ones. In last week's first presidential debate, Obama also endorsed solid investments in science and technology generally.

It's refreshing to see that this political realignment has also taken hold in Congress. Efficiency and conservation, frequently played down as feel-good measures in the past, are now seen as critical components of the energy equation. The notion that the government can use its purchasing power to advance the development of clean vehicles has been heralded as a way of increasing energy security while addressing the long-term threat of climate change.

Such ideas, if implemented, will drive new investment in the years to come. It will take time for the world's financial institutions to rebuild themselves following the implosion on Wall Street. But the fundamental need to create a more sustainable energy infrastructure to power the globe will be as strong as ever. Eventually the market will respond to that opportunity.

It would be naive to assume that progress on these issues will be easy, even with vigorous leadership. Private investment in new technology has increased significantly in recent years — but so have global greenhouse-gas emissions. This makes it all the more important that Congress and the international community move quickly to establish a solid and predictable climate regulatory framework to carry the world beyond the Kyoto Protocol. The current market turmoil is due in part to a continuing crisis of confidence, so a little regulatory certainty on greenhouse gases might be welcome. It won't solve the financial crisis by itself, but it would help businesses, financial institutions and funding agencies place their bets on the future. ■

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Life after Zerhouni

The next NIH director must juggle stagnant budgets, unhappy grantees and investigative lawmakers.

The imminent departure of Elias Zerhouni as director of the US National Institutes of Health (NIH) in Bethesda, Maryland, leaves large shoes to fill. Zerhouni, who announced last week he will quit his post by the end of October (see page 570), managed the agency with a blend of vision, toughness and dedication even

as it faced stagnating funding, ethical uproars and an explosion of knowledge in biomedical research. It is to his credit that he leaves the agency with far more friends than enemies, and with a well-earned reputation as a public servant who tirelessly maintained his integrity during the administration of President George W. Bush.

Whoever follows Zerhouni faces unenviable challenges. Stem-cell research remains stymied by an outdated presidential policy. The conflict-of-interest scandal continues as Senator Charles Grassley (Republican, Iowa) has reported troubling instances of extramural NIH researchers failing to report five- and six-figure payments from drug companies that could benefit from their research. And with

nothing but flat funding for the foreseeable future, NIH-supported labs are being squeezed nationwide. A new generation of academic scientists is being imperilled as many head for jobs in industry or elsewhere rather than face the daunting odds of ever landing an NIH grant.

All of this is occurring in the post-human-genome era with a knowledge base expanding at warp speed. Improved understanding and treatment of diseases have never been so tantalizingly close. So what qualities should the next president seek in a new NIH director? Three are key.

First, despite the fact that some two-thirds of the agency's budget is spent on basic research, the next director should be someone who understands, and is committed to, translating discoveries to the bedside. Zerhouni, a radiologist, did much to advance this agenda, although it was not his idea; the agency's mission statement makes it clear that the NIH is devoted to "science in pursuit of fundamental knowledge... and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability". The agency's next director should not throw money willy-nilly at translational research; accountability is vital as such work goes forward. But taxpayers who

invest US\$29 billion annually in the NIH deserve to see their lives and health improved because of it.

Second, the next director should be a gifted communicator who can speak with ease to the NIH's scientific constituency, to Congress and to the public. Translating complex research into terms meaningful to the public and to lawmakers is a crucial skill, especially as the NIH seeks its share of an ever-more-constrained federal budget.

Third, the next director should be an able manager willing to make and stick to tough decisions in times of ethical and financial stress. Although the ranks of current and former directors of the agency's 27 component institutes contain many amply qualified candidates for the top job, it may be worth reaching outside NIH circles for a candidate not beholden to long-time peers in Bethesda. Zerhouni, who came from the Johns Hopkins School of Medicine in Baltimore, Maryland, showed that this strategy can work well.

Overall, a director should be chosen with appropriate speed. Allowing the NIH's top post to sit vacant for months or years — as Bush did when he took more than two years to nominate Zerhouni — could do serious damage to the agency at a time when bold leadership is vital. ■

An end to secrecy

China's continuing openness on HIV is a welcome development and a model for other nations.

As part of a special collection of articles on HIV, this week's issue contains a Feature by Linqi Zhang of Tsinghua University in Beijing and his colleagues on the status of HIV in southern China (see page 609). Their conclusions are alarming: HIV prevalence is no longer confined to high-risk groups such as those who inject themselves with drugs, but is now seeping into the general population. Some of the most rapid increases are among men in same-sex relationships. Moreover, the findings confirm what veteran outside-observers of China and those concerned with HIV globally have long suspected: patterns of infection in southern China are similar to those in other developing countries — especially those experiencing large-scale migration from rural areas to cities, which provides men and women with more opportunities for sex.

The good news, however, is that China is doing more to make its AIDS statistics available. Traditionally, China has controlled access to such information very tightly. After the first AIDS cases were reported in the 1980s, for example, it took the Chinese government more than a decade to acknowledge publicly that the epidemic even existed. But during the SARS epidemic of 2002–03, the government's secrecy drew the outrage of Chinese journalists and non-governmental organizations alike; the resulting outcry led to a change in official attitudes.

The work of Zhang and his colleagues illustrates just how radical this change has been. Although the study was led by scientists inside China, the group included a leading US-based researcher, David Ho of the Rockefeller University in New York. The international team had

full access to data supplied by government authorities — the results of tests from 3.2 million blood samples. And the authorities apparently made no attempt to control or influence the authors' opinions.

Giving outsiders access to sensitive public health information would have been unthinkable in China even a few years ago — just as it is in many Western countries even now. But then, China is slowly becoming more comfortable with the idea that all of society will benefit by sharing data and knowledge with others. Some of this transparency can be traced back to 1972 and the landmark meeting between US President Richard Nixon and China's Chairman Mao Zedong. As noted by the historian Margaret MacMillan, author of the 2007 book *Nixon and Mao: The Week that Changed the World*, China had a very pragmatic reason for the rapprochement: it needed access to US technology. That opening was greatly expanded by Mao's successor, Deng Xiaoping. Deng accelerated scientific contacts with the rest of the world, sent hundreds of thousands of Chinese students to study in Western universities, and in 1987 hosted a landmark scientific conference in Beijing between China and the international community (see page 598).

Of course, opening up on information is not the same as successfully controlling the spread of infection. Much more needs to be done if the government is to meet its self-imposed target of limiting the total number of cases of HIV infection to 1.5 million by 2010. Nonetheless, transparency is an essential first step. There are the many nations — in North Africa and the Middle East, for example — where public discussion of HIV and its causes is still not as open as it could be.

China was once in a similar position — but it changed. There are many good reasons why others should follow suit. ■

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