The Global Financial Crisis and its catastrophic impact around the world were a clear demonstration of the interdependence and vulnerability of countries and societies. Among the causes of the crisis, which represented a crisis of confidence in financial systems and practices, were the complex development of derivatives, the lack of common sense in loan markets, the greed and duplicity of those who saw unsustainable growth as an opportunity to prolong profit while inventing and marketing toxic assets, and the failure of the regulatory and credit rating agencies to act on early signs of disorder. Most economies have now been stabilized, at huge cost in “stimulus packages”, but it remains to be seen if real recovery is permanent or when real reforms addressing the failed systems will bite.

The effects of the crisis varied significantly around the world, according to the exposure and risk positions of governments and economies. For Research and Higher Education, the effects of the crisis played out at a slightly slower pace, as the damage became apparent to both short and long term prospects. Leading research intensive universities had to adjust their financial and fiscal strategies to mitigate risk and to focus on future advantage. The intellectual and practical challenge is to emerge with a better, stronger, cleaner economy, which can build more harmonious, equitable and fair education systems as they apply to different cultures and societies. For leading world universities, it has been a sharp lesson that they will need to be more self reliant in shaping their own strategic advantages and sustainability.

Status and Opportunity. Since the GFC, there have been numerous international conferences and forums that have examined the role and potential of higher education in assisting recovery from the crisis. Higher education and research are now recognized internationally as engines for innovation and economic growth, producing the academic and business leaders of the future while developing the capacity to address major issues facing society. The global economic crisis brought significant obstacles, but also provides an opportunity to return to core values and to regain integrity in addressing the fundamentals of education and discovery, social equity, environmental sustainability and climate change, and the millennium development goals for the developing world.

International conferences of the OECD, UNESCO and National Governments predicted the effects on universities to include reductions in endowment and donations, research contracts with industry, investment and credit, public funding to education, and the ability to pay increasing tuition fees. There are already evident effects in increased graduate unemployment and reduced mobility of skilled workers.
Many world universities will experience increased demand, but will have to cap or to reduce numbers in line with their capacity and the development of infrastructure and support services.

**Global Developments.** Although the financial crisis may slow the rate of growth of international higher education and research, the demand for international higher education will increase, with OECD projections showing that international student numbers are set to double to over 5 million by 2020, coming especially from Asia. Human populations will rise from 6 billion to 9 billion by 2050, 60% living in the Asia Pacific region. The trends to internationalization of qualifications and training, through the European Bologna process and similar developments, will afford far greater mobility for students and staff. At the same time, many countries that are currently the source of international students will have more competitive higher education systems, which will retain their own students and attract more internationals. The competition for top talent will get even fiercer than it is now, with the leading researchers, teachers and students concentrated in the world universities.

Looking at a few examples, China's economy and education system are relatively in an enviable position. At the UNESCO World Conference for Higher Education in July 2009, the keynote speaker was China’s Minister for Education, Mr Zhou Ji. He stated that China will continue its year on year increase in investment in higher education, research, innovation and internationalization, sustaining the support of universities where direct or indirect government funding often accounts for more than 80% of operating budgets. The recent OECD review of China’s Higher Education system points out that China leads the world in inputs and investments, but the massive expansion over the past ten years has meant a significant lack of skilled manpower in teachers and trainers to meet or to maintain the deeper quality needs of the system. While China is having notable success in developing the top end of researchers and teachers, there is a gap in the numbers and quality of those who bear the main brunt of the vastly expanded national higher education system. It is a sweeping generalization, but with some truth, to say that there are also historically different teaching and learning practices between Chinese and Western education, with a focus in the west on questioning and experiential learning, while in China a more comprehensive learning of facts and figures is common. The similarities and differences between Confucian and Socratic approaches to thought and to learning can provoke new approaches for future success, with interesting innovations where fusion strengthens both.

In Europe the Bologna process, and the rapidly expanding availability of courses and degrees taught in English, bring new force and competition into the international higher education market. Europe (apart from Britain) is significantly under-represented in the league tables of the world’s leading research universities. Several European countries are now identifying the universities they consider can compete in the international stakes, and investing strongly in selected universities in order to change the past dynamic. Germany is a prime example. Outside Europe, similar investments are being made in Japan and in Korea.

Britain has achieved an impressive presence of its universities in the global research and higher education rankings, assisted by its now 20 year old Research Assessment Exercise, which has been adapted in several other countries. Supporters of the RAE credit it with improving Britain’s international status in research and education, but critics say it has diminished the priority and quality of teaching and has put at risk the collegial culture of open debate and interdisciplinary discussion. Now, while Britain is renewing its strong presence in international education markets, the global financial crisis poses a threat to the financial viability of several higher education institutions, and the recent removal of nearly a billion pounds of government funding from the higher education sector heralds a reversal of education investment policies over the past decade.

The United States has a long tradition of investment in its leading universities, public or private, and a concentration of government, industry and business enterprise around its campuses. This concentration of interdisciplinary talent, initiated a century ago, has led to the academic and innovation powerhouses that characterize America’s top 100 universities, along with their engagement with their local and remote communities. Now the global financial crisis, originating in America’s financial and housing sectors, is presenting challenge and risk to its education systems. Some State education budgets were reduced by 20
to 30%, while in some States, including the California system, proposals were made to raise tuition fees by 30%, raising fundamental questions about the value and return on investment of the average undergraduate course and of mass higher education. The economic slowdown is also reducing returns on endowment investments, so that universities which have become accustomed to using endowment income to cover recurrent expenditure face stark challenges. However, many leading research universities receive less than 20% of their operating budgets from State sources, so the reductions translate to 3-5% of total budgets – if one can hold other sources steady, which may be unlikely.

At a time of severe economic challenge, the Australian government announced increased investments in higher education and research in the 2009-10 budget, a welcome sign that Australia’s recognized success in international higher education and success will be supported, at least in the short term. Australia scores impressively in international university rankings, but one of the world’s most successful education export sectors will face increased international competition in coming years and must refine and develop the quality and distinctiveness of its education offerings in order to stay ahead. The government and the leading universities have recognized this need, and there are several strategic reviews in progress to ensure that the competitive edge will be sharpened.

Looking beyond the stimulus packages of most developed economies, as yet with unpredictable success, there are serious challenges to many universities in meeting their quality goals and their costs. Australia is taking a steady approach with welcome increases in budgets for education, research and innovation. There are interesting synergies in the Chinese and Australian approaches that may provide a way forward, with further potential partnerships in research and education that can be both efficient and cost effective.

**International Cooperation.** Universities must build on the strengths of their international partnerships and networks. In research, partnerships and joint ventures are a way to accelerate results in science and technology, health, the humanities and social sciences. Appropriate teamwork can deliver win-win solutions to global challenges including adaption to climate change, the deepening of cultural understanding, new models of governance and economic development, and the capacity to deal with emerging diseases, ageing of populations, urban and rural balance, food and environment security and enlightened education. These and other challenges, along with the capacity and infrastructures to deal with them, can often be met best with international teamwork that shares both ideas and costs.

The growth of effective global partnerships between peer universities is a relatively new development over the past ten years, but there are now many networks that seek cooperation in areas of mutual interest at national and international levels. Most leading economies have universities that are partners in such networks, promoting external international engagement as well as internal internationalization and reform. The ambition and profile of the international university, including world class quality in research and teaching, opportunities for international experience for staff and students, and the ability to grow the international leaders and citizens of the future, is an exciting and achievable objective. It is also an opportunity to build on knowledge and learning as diplomacy, not a new concept but a much needed one still, as no one country or university can take on the many global challenges that require attention for the future. International partnerships and networks are an effective way of benchmarking and accelerating the evolution of best practice.

**Initiatives for Governments and Universities.** In many countries, the rapid expansion of education and research has outpaced the planning and provision for skilled leaders, experts and teachers. There are big gaps in the availability of national and international academic staff, along with the demographics that predict a wave of retirements among academic leaders. Greater cooperation between universities, industry and governments can develop new frameworks to bridge this gap and to jump to the next levels of social, economic, environmental and cultural renaissance. Governments will need to build the institutional investments and infrastructure for new knowledge and learning. Universities must also look outward to source and develop talent, understanding that future opportunities require fundamental reforms rather than incremental drift. In areas where talent is scarce, international joint appointments may become common.
A similar strategy could be applied in establishing joint appointments in developed country universities of academic leaders from developing countries, assisting them to remain in their countries where their leadership is required. The retention of research and education leadership within developing countries, leading to sustainability and growth of educated populations, is an essential requirement for harmonious development.

**Graduate Employment.** It is ironic at a time when the world is crying out for well trained workers and leaders, that there is an apparent “over production” of graduates and a rise in graduate unemployment. Strategies are required to bridge the period until economies have regained strength and security enough to engage talent, or there will be a loss of impetus and a wastage of bright people. In particular, strategies are essential that include international experience, internships and job placements, providing graduates with greater familiarity and confidence in the transition to working life and career. This teamwork requires universities and industry to work together with governments to create opportunities, such as the availability of job experience in international companies which themselves will benefit from the availability of more developed, job prepared recruits.

**Quality Assurance.** Alongside the rapid expansion of higher education, the quality of learning and teaching has often diminished as numbers overtake capacity and substance. There is a widespread need for fundamental reform of curricula, which should emphasize basic principles, the frontiers of knowledge, and the relevance of knowledge to real life, rather than rote learning of facts unaccompanied by the ability to question, challenge, analyze and synthesize to new levels of thought and solution. In Australia, the Australian Universities Quality Agency audits universities, benchmarks best practice, reviews education and research strategies, and reports publicly on the five yearly assessments of each institution. The Australian Government is also developing “compacts” with each university so that distinct strengths and advantages can be developed, rather than having one set of rules for all.

**The World Class University.** It is a remarkable sign of the challenging and turbulent times that the various ranking tables of international universities are receiving such heightened interest. In the past ten years, the rankings have led many universities to initiate new strategies and business plans to enhance their status and reputation, some of these departing from education fundamentals. The rankings systems are still an imprecise art, especially where they present relatively simplistic comparisons of very different institutions. The advantages of rankings are where they may genuinely enhance quality and performance. The disadvantages are where the “one size fits all” approach puts distinctiveness and choice at risk. The tendency to use simple league tables in a complex environment also presents the risk that they will be too great an influence on the mobility of staff and students. This risk is apparent already, especially in cultures that emphasize competition above substance. However, the accuracy and credibility of ranking systems will improve over the next 5-10 years. One of the oldest such rankings, the US News and World Report, has listed America’s Best Colleges for 26 years and interestingly lists now under different categories to provide a far more comprehensive and critical analysis. For example, the differences between major, comprehensive international research universities with all of the disciplines and extracurricular opportunities, and small discipline specific research institutes that are sometimes called universities in a different sense, make it impossible to rank other than on a discipline specific basis.

**Education at the Cross Roads.** From the above summary, it is clear that the global financial crisis has forced many governments and universities worldwide, as well as industry and other stakeholders, to revisit and review the importance of higher education and research in economic development. The roles of the international research university, regional and local universities, should rightly be evaluated in order to build a stronger, cleaner, fairer economy and society in future. In such times, it is common to make comparisons of individuals and institutions out of context and in ignorance of history and culture. There are different attributes and advantages to higher education systems from different countries. The challenge is to focus on what really are the international fundamentals for successful research and discovery, teaching and learning, leadership and service, and build them in the context of national strengths and attributes. This will provide a world where globalization and participation provide endless opportunity for
new innovation and understanding. While the study of a foreign higher education system is important and interesting, it is unlikely that attempts to “copy” a Cambridge or a Harvard – or any other leading world university – in a different national environment would succeed. China, India, Africa and Latin America are and should be building their own models, with distinct character, to emphasize intellectual strength and diversity, along with the quality and integrity of thought and learning.

Consequently, the World University of the future can be a different construct in different cultures, celebrating and building different strengths and distinctions, while taking similar approaches to the shared fundamentals of research, teaching, international and community engagement. Among these fundamentals are quality and excellence in all activities; appropriate autonomy and academic freedom in intellectual pursuit; and international and national relevance in research and curriculum, while encouraging basic research that will find its own applications. The support and teamwork of government investment is essential for public good and for social, environmental and economic development. Above all, the World University is about people, staff and students, in supporting excellence and diversity, along with the pathways that reach back to K12 education and forward to top degrees and careers.

**Resources and Sustainability.** The global financial crisis posed a significant threat to research and education development, causing the timid to retreat and retrench. This is a time for a bold and steady commitment of government, universities and industry to continue progress and growth that will contribute to harmony, wisdom and success. The challenge is to understand and learn from the financial crisis as an opportunity to achieve reforms that will sustain us for the next 20 years. To quote from the communiqué of the UNESCO World Conference on Higher Education 2009, “At no time in history has it been more important to invest in higher education as a major force in building an inclusive and diverse knowledge society and to advance research, innovation and quality”.

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