



**MINISTRY: FINANCE**  
**REPUBLIC OF SOUTH AFRICA**

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**INTERNATIONAL CONGRESS OF ACTUARIES**  
**Cape Town, 7-12 March, 2010**

**Keynote Address:**  
**Minister of Finance Pravin Gordhan**

It is a great privilege for me to welcome the International Actuarial Association to South Africa for this conference. We are delighted that you have chosen to visit our beautiful city of Cape Town – this is best time of year to be here.

Your conference program is indeed focused on a number of interesting topics and challenges. Let me begin by congratulating you therefore, not just on the choice of an excellent venue, and for correctly reading the relevant statistical data on the appropriate time of year, both weather and trade related! Let me also congratulate you, Mr Smith, and your conference organising committee, on a well-balanced portfolio of papers – some conventional topics, others more risky, some promising high returns, others bordering on the esoteric. That is as it should be. This is an opportunity to reflect not just on progress in the depth and analytical rigour of traditional actuarial disciplines, but also to explore some of the frontiers that overlap with other fields – finance, health sciences, governance and accountability, social protection, enterprise risk management, risk management for the poor, microinsurance, and household welfare. Your program has opportunities for engagement with all of these areas, and more.

In South Africa, we have a number of vital national objectives which require the support, goodwill and active involvement of the actuarial profession. Retirement financing, health insurance, social security reform, appropriate tax regimes, are some of the challenges that SA is dealing with. The successful development of appropriate policies and programs must help to create a developmental state and a caring society.

Many of you will know that I have been in this job for just ten months or so, and it has been a rather bumpy learning process. There isn't a professional diploma for finance ministers, and in truth I still haven't found anyone in the office who knows where the tool-kit is kept. Is this about economics or politics, doing the accounts or doing the system engineering? How come the economic advisors keep changing their minds? Why can't they talk English instead of algebra?

The financial crisis and the consequent economic crisis that has swept the globe, has had many negative results. Millions are out of jobs, the poor are suffering more, the achievement of the MDGs is placed in doubt and recent economics gains have been lost. Economic models have been fundamentally destabilised, risk models and risk management are in crisis, and the world is searching for new frameworks and conceptual models for a more equitable and sustainable economic model.

I used to be a tax-collector. That was a lot more fun – there was a regular army of lawyers and accountants to make sure the law means what we want it to mean, and when I paid courtesy visits to business they knew exactly what was under discussion. At the end of the year we did a reckoning, and there was really just one number at the bottom of the page that really counted.

But this crisis has rendered economic development and the wider public finances a whole lot more complicated. It's not just that countries are at different stages of development, and have to make difficult choices about their growth paths; it's not just that there are many public spending priorities and limited resources to be allocated. It's not just there is risk and uncertainty in every investment choice and in every economic projection or fiscal aggregate that forms part of the framework of numbers through which the public finances are disciplined over time. There is also complexity in the institutional, normative side of public finance management, the construction of social capital on which durable economic and fiscal progress must be built. And there are very real trade-offs between what we can achieve today, and what we build for our children and our children's children. What we build in the realm of institutions, or rules and regulations, and of values and norms of behaviour, may well count for far more than what we construct on the physical landscape or measure in our trade and finance statistics.

That institutions are important is not a new insight, and of course it is true of the tax system, government service delivery, how businesses work and how civil society organisations interact. But what is new is that we have infinitely more data and data processing capacity at our disposal, and statistical analysis can increasingly be extended into territory that used to be regarded as non-financial, unquantifiable, social or philosophical.

It is not that we no longer need political philosophy or anthropology or the arts. More than ever, we need to re-assert that to be human is to share humanity with

others; that money-related measures are just one amongst many categories of value.

Yet there are statistical applications and computing power at our disposal now, that can in very practical ways be brought to bear on so many aspects of life and service delivery that we used to think of as formal or institutional.

Modern supply chain management and procurement systems can use computer applications to improve integrity, transparency and competitiveness.

Audit and fraud prevention programmes can use up-to-date information, cross-checked across a variety of administrative databases, to identify anomalies and trigger investigations long before the conventional audit follow-up procedures would indicate a problem.

Social insurance and risk analysis can make use of much denser, up-to-date data resources to improve targeting, reduce abuses and more rapidly respond to needs.

Financial and economic regulatory agencies have far greater access to data than ever before, and clearly have to find ways of using this information to protect the public better without violating individual privacy or unduly interfering with business competitiveness.

In all four of these areas, we have seen monumentally large failures of responsibility over the past three years: failures to connect and understand information properly, and failures to link accountability and responsibility across interacting categories of decision-makers, advisors and transacting agents.

I think this has implications for what actuaries do, what responsibilities they take on and how – and these issues are reflected in the attention in your programme to governance and ethical challenges. But I hope I can also encourage you to reflect on the implications of the technological possibilities of statistical and data management power in the extraordinary times we live in, when data flows are no longer measured in gigabytes and terabytes, but we are told to think in terms of exabytes and zettabytes and yottabytes...<sup>1</sup>

We have, to put it simply, far more surveillance capability than even before, and far more data-mining and analytical power than was available to our predecessors.

And so the role of the actuary, who is pre-eminently a statistical analyst, has so much more scope than ever before. Yes, one trained professional with a hand-held computer can do in 20 seconds what a room full of students might have

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<sup>1</sup> The Economist, Feb 27-Mar 5 2009; special report on managing information, p 5; a zettabyte is  $2^{70}$  bytes, equivalent to all the digital information currently in existence.

taken a month to do a generation ago. But the intellectual challenge before us is to find new ways of using data and statistical analysis that contribute to addressing not just the economic and financial but also the institutional and social challenges before us.

So I am pleased to see health information analysis on your conference programme – that is surely an area in which we all, developed and developing countries, want to see progress, partly because it is so important to people's wellbeing and partly because the gains from improved cost-efficiency and better allocation of resources are so large.

Your discussion of pension reform and social security options is also of special interest to us in South Africa, as we are ourselves exploring options for better preservation of retirement savings and a standard mandatory social security arrangement. It is reassuring to know that we can explore options against the background of a century of well-documented experience of other countries – but it rather complicates the reform process that there are so many permutations to consider and the advisory chorus is not always entirely harmonious...

Like many other professions, actuaries also need to grapple with and find answers to several contemporary challenges and issues:

- Promoting and deepening professional responsibility and public – spiritedness;
- Understanding that statistical analysis is not just an informational artefact but also contributes to the "integrity" and effectiveness of institutions;
- Balancing client interest versus public interest – with a greater leaning to the latter;
- Enhancing both the codes of ethics and management of conflict of interest;
- Revisiting risk, enhancing ERM, and incorporating the lessons of the recent "black swan" events;
- Being aware of the dangers of short-termism and the long term implications of daily decisions and advice;
- Governments have become increasingly the insurers and assurers of last resort – what are the new forms of moral hazard that are emerging?
- Building public trust and confidence and accountability through "deobfuscation", information accessibility and transparency
- Recognising that we live with unsustainable economic and social imbalances in the world and that the global future brings great uncertainty;

I trust that these and other challenges and issues of our times will be addressed during your conference. As a profession trained to deal with the future and its

likely probabilities, you have both an unenviable task and exciting possibilities to connect the dots and evolve new conceptual frameworks to not only understand the world but change it.

Finally, I want to congratulate my compatriots in the Actuarial Society of South Africa on their successful hosting of this conference on the African continent. We are proud of your achievements and the high quality of your work both in the public and private sector.

Thank you.