The global financial crisis (GFC) has created possibilities for a greater role for actuaries in the financial world. We have a responsibility to grasp these possibilities as having value to society as well as the profession. Actuarial journals may have an important part to play.

The GFC seems—in one respect—to have led us out of a fog of confusions. We no longer have to argue against a reductionist economics, and notions that markets are perfect and people rational. It reminds me in one way of the end of apartheid, after which it was not necessary to argue that black people should have rights. Now as then, it is difficult to find people who believed in the old paradigm.

Unlike then, however, there seems no sense of hope that we have emerged into the light, but rather a sense of confusion and agreement only that “it would be a pity to waste a good crisis.” It seems to me that, as actuaries, we have a real opportunity to reassert the value of our professional training and structures, and to contribute to the reconstruction of the theory and practice of finance.

In my view, the first step is to set out again our values and the goals we pursue. The old virtues remain the only possible basis for valid values, and are indivisible:1

- Integrity means being trustworthy when dealing with family, colleagues and customers.
- Wisdom requires a search of truth in all its shades of colour and grey.
- Prudence means the wise husbanding of our resources and avoiding unnecessary risks.
- Temperance seeks a balanced and full life.
- Justice means treating all people fairly and recognising their equal dignity.
- Courage is necessary to defend ourselves and our fellows.
- Love means wanting the best for others as well as ourselves.

From these values, our training, and the need for specialisation in a modern economy,

1 A more detailed discussion is given in “Vocation and Wisdom in Financial Services”
comes, I suggest, the conclusion that the ultimate objective of our professional lives is to use our energies and abilities to contribute towards the financial security of the people in the societies in which we live.

This may immediately raise the objection that actuaries are advisers rather than actors in issues of financial security, and that we should leave it to those with responsibility to make the policy decisions. I would suggest that this view is naive—where it is not being used to evade responsibility. Advisers should be disinterested only to the extent that their personal interests do not cloud their recommendations. Otherwise they cannot have the real interests of their clients at heart. And if advising or even lobbying government, experts surely have a greater role and at least the same rights as other citizens? There is a greater risk that experts will abuse their position—such is the case with all power—but there is no profit, indeed no living, without risk.

The presence of this risk does provide one of the justifications for professional ethics. Management of the risk also calls for professional introspection: a function that can be fulfilled particularly well by academics and retired actuaries more removed from short-term commercial interests. Our actuarial magazines and journals have, I think, done fairly well in providing a place where questions of this type are raised.

- Actuaries have often raised problems relating to excessive costs and poor advice in life insurance.
- This volume includes an exchange of letters on the surplus-refund issue, which is the tail end of a debate that has also provided minimum withdrawal benefits and pension increases. (I think South African actuaries have played a particularly constructive role in creating a fair model for these.)
- Actuaries have been on both sides of debates about tax concessions for savings and insurance.
- One issue that is occasionally raised is how increased regulatory complexity benefits large established players and inhibits freedom and innovation.
- Another that does not seem to have been raised is how the interests of the financial sector seem to have ensured that carbon trading has dominated carbon tax in the global-warming debate.

To return to the question of the goals we pursue, what are the practical changes desirable as a consequence of the GFC? I am taken by analysis in Mainelli & Giffords (unpublished). Their key point is that “too big to fail is too big to regulate” and that the challenge is not the development of further regulation, but the restoration of greater diversity, mutuality and more contested markets. These are objectives with which I can identify, and where the profession could have an expanded role. Extrapolating their vision, I think of the breakup of existing behemoths, the restoration of mutuality in the governance of some markets and organisations, and the fostering of new competitors.

Another and rather different vision is provided by the World Economic Forum,²

whose preferred scenario is for greater international coordination with a greater role for the newly developed economies of the East. It is not just a decade’s frustration with the way in which politics have trumped logic in international accounting standards that makes me shudder. Coordination is not necessarily control, but it must involve the centralisation of power. There are two objections to inter-governmental centres of power: firstly, there is the probability of some corruption: “All power tends to corrupt, absolute power corrupts absolutely.” Secondly, the resultant homogeneity creates its own risks, of financial loss as large companies match each other and herd together, and of failure to innovate. Far to be preferred, in my opinion, are more, smaller companies—a by-product of which would, fortunately for us, be more work for competent professionals.

Actuaries could, in fact, have more of a role in all companies, not only those in the financial sector. Mainelli & Giffords (op. cit.) identify a particular need for ‘confidence accounting’, meaning the introduction of statistical measures of confidence into the financial accounts of all companies—financial and otherwise.

So is there something about the actuarial profession that makes it able to make a special contribution? I would suggest that we do have a traditional approach to the management of financial risk that is more holistic, and more able to deal with the complex system that is the world of finance. In particular, I would suggest that actuarial training, at its best, develops sound judgement that allows us to better understand:

- advanced mathematics of finance, but is just as concerned with understanding the assumptions and their limitations as with the calculations;
- that markets cannot possibly be always efficient, but that market prices are relevant measures of value even if they sometimes are an inappropriate basis for decisions;
- that financial statistics are just one objective measure of history, but choosing them involves subjectivity, and they are quite likely to be misunderstood if they are not contextualised; and
- the necessity of all the virtues in the management of institutions, and the need to foster their development within a professional body.

If, as Mainelli & Giffords (op. cit.) suggest, the GFC arose partly because of a failure to understand the way in which the world financial system holds together in its complexity, the solution will require the development of people with that holistic understanding. An actuarial training provides much of what is required, and continues to develop in this direction, as evidenced by Lowther, McMillan & Venter (2009) in this volume. Thinking perhaps of people with such skills and values, the International Actuarial Association3 (IAA) has recently called for the creation of a ‘Country Chief Risk Supervisor’ to address issues of ‘macro-prudential regulation’.

The opportunity for actuaries therefore is for them to play a wider role in a greater number of organizations, and in regulators. The most important element of the wider role


SAAJ 9 (2009)
will be a consideration of the systematic risks to which all organisations are exposed.

To do so, however, not only shall we have to work harder at understanding the bigger picture and what the IAA paper calls ‘predictable irrationality’, but we shall also need to work to ensure that actuaries are appointed to positions of real influence—with power to discourage excessive risks.

But how are we to get to grips with the complexity of the system? The geographers have made progress at modelling the weather using millions of data points collected from thousands of weather stations and massive computing power. Is a financial equivalent possible? Some investment houses have made progress in this direction, but the data are all commercially sensitive—and I have yet to come across evidence that they were successful in identifying the risks related to the GFC.

Neither admittedly were actuaries, although—with the ghastly exception of AIG—insurers appear to have avoided insolvency and the need for government rescue. If we are, however, to play a significant role in macro-prudential management, then we shall have to lift our game.

There are three areas that deserve special attention. The first is the area of values and their place in our education system. The failure of the value system (especially perhaps the deference to greed, and a habit of scoffing at prudence and wisdom) is frequently cited as one of the causes of the GFC. While we have not succeeded entirely, the actuarial profession has a tradition of at least aspiring to virtue. It can be an area of competitive advantage on which we should build. It would be good to heed Mickey Lowther’s letter calling for a journal of actuarial education, which is also published in this volume.

A second area of development would be of sophisticated international financial models that might identify potential risks and their likely outcomes. Such models will be expensive and require rather more active fund-raising than we have previously attempted, but the potential value is enormous. The objective of the models would be to attempt in particular to identify disruptive points of inflexion in trends such as those discussed briefly below.

Before and after the data have been marshalled and results obtained, we shall have, however, to rely on our judgment as to their relevance. But I suggest it is foolish and irresponsible to make such thinking entirely private: foolish because a wide range of input is required; irresponsible because the wider society needs the input. The identification of macro-risks does become the responsibility of the profession if we aspire to manage them.

The third area of development therefore is to ensure that we are debating the potential risks of the future, and the actuarial journals are surely one of the appropriate avenues.

The first debate is perhaps a more careful analysis of the causes of the GFC itself, which may have been the confluence of inflexions in more than one trend. The questions to which I would really like answers are as follows.

What was the role of the commodity inflation that preceded the losses and collapse in confidence? The increase in the price of oil alone seems to have taken more out of oil consuming economies than all the credit losses. This seems to me to be a critical question as it seems quite likely that we are close to peak oil production, and that declining production is likely to produce a number of crises during the next half century.
Was the fall in the Chinese economy a separate or consequential response to the US financial collapse? This is important as the shift of the Chinese economy from its incredible investment-led growth to a more normal level will have significant ripples on the rest of the world. One example may indicate that this change is imminent: now responsible for 50% of world steel production, China surely cannot grow much more?

Does the apparent liquidity of markets in derivatives and structured credit products lull people into believing that these markets have a greater ability to absorb risks than is really possible? In particular, was the market in equity and credit risks analogous to the reinsurance spiral that almost destroyed Lloyds? Also, because of the use of derivatives in popular insurance and annuity products, what is the capacity of world markets to absorb equity risks through issuing puts and calls?

What happens when rising levels of national, corporate and personal debt have to level off—either now or in the future? This particular question often seems to attract heat especially from those who view all debt as undesirable. For this reason perhaps, there does not seem to be sufficient discussion of the relationships between lender and borrower, and the responsibilities, pressures and different behaviours of each.

Every economic unit does not have to be self-financing. A certain level of personal indebtedness for home financing is desirable for the development of nuclear families (although I think income-contingent repayments are more suitable than interest-bearing instruments). Lower levels of corporate debt are acceptable to facilitate the growth of smaller businesses and the funding of operating costs. National debt to fund infrastructure is appropriate for inter-generational equity. The question we have to ask is what levels of debt become so unsustainable that they cannot be repaid except by default, forgiveness or inflation? The management of these extreme levels is surely partly in the actuarial bailiwick. Most obviously, insurance can provide for some of the idiosyncratic risks, but banks can also learn from insurers’ use of exclusions, force-majeure clauses and other contractual terms that prevent a non-diversifiable but foreseeable catastrophe destroying otherwise sound institutions.

What is the role of perverse remuneration in financial imprudence? There has been discussion and there is likely to be action on one-sided options of executives. Less discussed, but perhaps closer to our field is the role of investment managers in encouraging the pursuit of unsustainably high returns. Barely mentioned outside academic papers is the possibility that excessive remuneration contributes to the hubris more classical minds would associate with overreaching leadership and disaster.

I doubt that these debates will come to a rapid resolution, but in designing our stress tests, actuaries should at least consider them.

Other debates would relate to other risks that the future will bring us, demographic, economic, political and social. Admittedly there are those with more expertise in these areas than actuaries, but this is true of every discipline that we use: from demographics to computers, from economics to the cleansing of data. Our problem is to apply the best from

---

4 Nicely discussed in Paredes (unpublished)
other disciplines to the real-life problems faced by the institutions we serve. Do gerontologists deal with the financial problems of the aged, or derivative dealers ensure that there will be enough counterparties to continue their trades? Should actuaries? If not, who?

Anthony Asher

REFERENCES