

A rethink of the way financial institutions are audited would help to improve confidence in the sector, argues **Professor Michael Mainelli**, Chartered FCSI. Here, he advocates a new approach

# Accounting for confidence



**AFTER THE FINANCIAL** crisis, we realised that the balance sheet and going-concern statements of many of our major financial institutions had been wrong. The 'credit crunch' of 2007 was a systemic failure. Interactions between elements of the system (banks, rating agencies, regulators, governments, financial instruments, auditors and so on) mattered more than the specific behaviour of a particular element. If you believe that the crisis was an apocalypse or foreshadows such a meltdown, then you should be considering fundamental redesigns in numerous areas. How might we redesign auditing? Auditing and accounting have been subject to much criticism over the past two decades. Criticism perhaps reached a peak in the early 2000s after a series of telecommunications and internet failures, coupled with Enron's collapse. Another peak in the criticism followed the financial crisis of 2007–08. These criticisms are many and varied: audit firm market

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## *Rarely does criticism question the basis of audit and accounting in terms of measurement science*

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concentration, lack of independence, principal-agent problems, lack of indemnity, relationships with regulators, mark-to-market rules. Rarely, if at all, does criticism seem to question the basis of audit and accounting in terms of measurement science. People who move from science to accounting are stunned to find that auditors do not practise measurement science. Scientific measurement specifies accuracy (how close a stated value is to the actual value) and precision (how likely repeated measurements will produce the same results). A measurement system can be accurate but not precise, precise but not accurate, neither, or both. If your bathroom scale contains a systematic error, then increasing sample size by weighing yourself more often increases precision but not accuracy. If your

bathroom scale is very accurate but your past and future weights fluctuate wildly, today's spurious accuracy is not a good guide to your weight, for example for safety purposes.

Scientists view measurement as a process that produces a range. They express a measurement as  $X$ , with a surrounding interval. There is a big difference between point estimation and interval estimation. Auditors provide point estimates; scientists provide intervals. For example, physical scientists report  $X \pm Y$ . Social scientists report interval estimates for an election poll and state how confident they are that the actual value resides in the interval. Statistical terms, such as mean, mode, median, deviation or skew, describe a measurement distribution's 'look and feel'. The key point is that scientists try to express characteristics of a distribution, not a single point. Finance should be no different. 'Confidence accounting' means using distributions rather than discrete values in auditing and accounting. This is part of a shift to interval estimates and confidence levels that will make auditing and accounting resemble other measurement sciences more closely. The term was coined by proponents of 'Long Finance' (*longfinance.net*), an initiative to improve society's use and understanding of finance over the long term.

### The shape of things

In a world of confidence accounting, the end results of audits would be presentations of distributions for major entries in the profit and loss, balance sheet and cashflow statements. The value of freehold land in a balance sheet might be stated as an interval – £150,000,000  $\pm$  45,000,000, for example – perhaps recognising a wide range of interesting properties and the illiquidity of property holdings. Next to each value would be confirmation of the confidence level, for instance 95% confidence that another audit would have produced a value within that range. Finally, there would be a picture – a histogram of the distribution – so people can see the shape of things. The proposed benefits of confidence accounting include a fairer representation of financial results, reduced footnotes, measurable audit quality and a mitigation of mark-to-market perturbations. To move discussion further along, it helps to show a worked example – a pro-forma set of accounts based on confidence accounting. In April 2011, the Association of Chartered Certified Accountants commissioned Z/Yen Group Limited, the commercial think-tank of which I am a director, to provide a short worked example of how a set of audited accounts prepared under confidence accounting might look, and to promote the paper via Long Finance for discussion. The Chartered Institute for Securities & Investment ran a seminar recently to discuss the draft example.

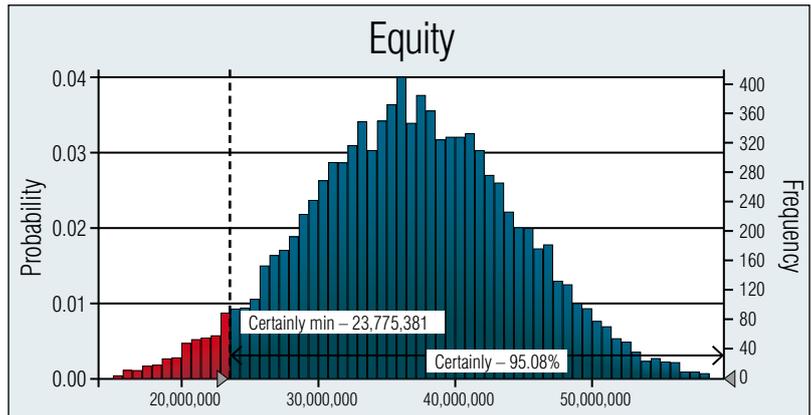
### Quality control

The worked example takes the form of a presentation by the Finance Director of a hypothetical UK bank, loosely based on an actual major institution. The example concentrates on the key line items in the balance sheet and income statement and draws on disclosures in the annual reports over a five-year period. It attempts to illustrate the key assumptions that are required to produce a pro-forma set of accounts based on confidence accounting, including a graphical presentation of the results. A sample slide from the presentation, where the Finance Director works out whether or not the bank retains sufficient equity, is reproduced here. The Finance Director points out that the mean value of equity at the balance-sheet date is £36bn, with a minimum of £6.5bn and a maximum of £65bn. There is 95% confidence that the value of equity is

### Key forecasts

	Total assets (£bn)	Total liabilities (£bn)	Equity (£bn)
Mean	697	660	36
Minimum	666	633	6.5
Maximum	728	689	65
95th percentile	682	672	24

Source: Z/Yen Group Limited, 2011



at least £24bn. The 95th percentile value supports a 'going-concern' assertion (assuming that £24bn is sufficient for regulatory requirements). If the state of the world does not change, the realised value of the balance sheet should be no more than £12bn (£36bn minus £24bn) worse than the mean. If the income over a subsequent period should fall £12bn short – and cannot be explained by either a change in the fundamental business climate, a substantial change in the business model and exposures or a very large intra-period event – then the quality of the balance sheet (and audit) must be called into question. The worked example concludes that confidence accounting can be applied to banks and results in a fairer representation of financial results. Further, it provides a basis for beginning to reconcile balance-sheet valuation and market value. Certainly, it highlights the need for clarity between uncertainty over valuation during the period of going concern and risk about changes in the state of the economic climate. One big benefit of confidence accounting is that it reduces the size and complexity of annual reports – in the case of the Royal Bank of Scotland, for example, by between 30 and 60 pages. Finally, under confidence accounting external assessors could evaluate auditors' performance. Any audit firm will have a number of client restatements or failures over, say, a decade. If failures are within confidence levels, then we have a good, or even too prudent, auditor. If not, perhaps a sloppy, or statistically unusual, auditor. Markets will price the value of higher confidence levels, and quality auditors will be able to value work on better disclosure appropriately. Redesigning the edifice of audit begins with rethinking. ■

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