



# 100 NOT OUT

## Why you should plan for a century

*In the last two decades, investors have been hit by one scandal after another. A group of City of London-based boffins called Long Finance are thinking up solutions to such scandals that can stand the test of time. Here, professor Michael Mainelli outlines what they are.*

**Long Finance was born in 2007 when we began making presentations to our clients on the then liquidity and credit crises, asking the punch question: “When would we know our financial system is working?”**

The question provoked answers such as “when normal investors can safely fund a 75- to 100-year forestry project without subsidies or tax breaks”, or “when a 20-year-old can responsibly enter into a financial structure for retirement”.

With your average 20-year-old now living to 95 or older, add on dependants, then this is at least a 100-year question. If you look back at the past century of pensions, from 1913, it is not a pretty picture.

Long Finance sets out to improve society’s understanding and use of finance and investment over the long term.

In contrast to the short-termism that defines today’s economic views, the Long Finance time-frame is roughly 100 years. The idea behind investing for the next century is that we can eliminate most costly financial scandals by eradicating short-termism, thus creating an ethos more of wealth preservation than wealth creation and rebuilding trust in our investments.

## **Themes and streams**

There have been two enduring long-term investment themes over the past century – population growth and resource scarcity – and a big social challenge, sustainability. Whether it is climate change, water, forests, pollution or biodiversity, people clearly have more and more concerns about sustainability in the long term.



**Professor Michael Mainelli**

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We at Long Finance have big doubts over the wisdom of our governments and our economies. We suggest four basic areas of knowledge, or four streams, that we believe need to be included and integrated in order to understand and explain everything.

- **Choice:** Understanding how people develop knowledge and biases and how these perceptions affect fairness and trust; how people decide as individuals and in groups; how democracy and long-term decisions interact.
- **Economics:** Pondering models of exchange between people and expanding the debate about the role of government and social institutions.
- **Systems:** In the world of commercial and political economics, systems thinking encourages us to break down complex systems into sub-systems with interlinked information loops of feed-forward and feed-back.

- **Evolution:** In particular, innovation and competitive selection. This stream highlights wicked problems that can't be solved, just evolved towards incomplete solutions, such as climate change.

The most complex thought we put across is that people need to use tools to value lower volatility and increased certainty.

The ideal reward for a business pursuing sustainability would be a demonstrable increase in shareholder value. Reduced earnings volatility should increase value. We studied 1,000 UK companies over a 33-year period and showed that the difference between the top and bottom quintiles of profit stability is a 25- to 30 per cent share price premium for the most stable quintile. Investors favour low-profit volatility. Managers can estimate how reducing profit volatility may help their share price.

## Wicked problems

Two other words help to explain the integration of knowledge that we seek. They might seem archaic, but we think they're overdue for revival.

The first is consilience, which means the unity of knowledge, or, more literally, the heaping together of knowledge. The idea originates in ancient Greece and the humanist biologist Edward O. Wilson revived the term in the 20th Century. Consilience describes the blending of our four streams into real commerce.

The second word is catallactics. Economist and philosopher Friedrich Hayek claimed catallactics meant: "Significantly, not only 'to exchange', but also 'to admit into the community' and 'to change from enemy into friend.'" Indeed, Hayek even suggests that someone who studies exchange or commerce might be called a catallactist rather than an economist. Communities matter.

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On our way to a sustainable and equitable world we encounter no shortage of “wicked” problems. Tim Morgan at Tullett Prebon calls these dangerous exponentials – population, fossil fuels, money supply.

In this context wicked means messy, circular and aggressive. These problems are not the comparatively tame problems most decision theorists study: for example chess, game theory or puzzle solving. The world really is messy, circular and aggressive.

According to Laurence J Peter, of The Peter Principle fame: “Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.”

It’s not all negative. A good example of consilience is the success of transferable fish quotas worldwide: a regulator sets a species-specific total allowable catch, typically by weight for a given time period; quota shares are allocated and can be bought, sold and leased; transferable quotas can be allocated to individuals or communities.

Transferable quotas are an excellent example of consilience about choice: deciding how to help people choose sustainable fishing; economics, using markets to allocate scarce resources; systems, thinking holistically about the environment and society; and evolution, from the science of complex bio-systems to the evolving technologies of fishing, which make it increasingly efficient.

Long Finance has a rich research programme in many areas. Perhaps our overall approach is trying to find better long-term measures – we never see a long-term problem we don’t try to measure differently. Let’s look at three of our ‘evolution, not revolution’ approaches to making the financial system work.

## Confidence accounting

Confidence accounting is a proposal to use distributions, rather than discrete values, where appropriate in auditing and accounting. In a world of confidence accounting, the end results of audits would be presentations of distributions for major entries in the balance sheet.

The proposed benefits of confidence accounting include a fairer representation of financial results, reduced footnotes, more measurable audit quality and a mitigation of market-to-market perturbations.

Confidence accounting proposes that financial accounts show ranges of values, with a clear and concise explanation of the assumptions used to generate the expected value. This could be a full-blown distribution range, a bit like the Bank of England's inflation "fan" charts.

It could also be some simple downside and upside ranges at, say, the 5 per cent and 95 per cent confidence ranges as assessed by management. Ranges could be expressed using something graphical – think candlestick diagrams. Confidence accounting has obvious implications for investment in sustainability, holding management accountable, the relationship between risk management and finance, the concept of a "going concern", the length of footnotes and the ability to measure audit quality.

## Index-linked carbon bonds

Long Finance has developed a simple proposal to promote climate-change finance – index-linked carbon bonds. An index-linked carbon bond is a government-issued bond where interest payments are linked to a carbon target – levels of feed-in tariffs for renewable

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energy, emission certificate prices or actual greenhouse gas emissions of the issuing country.

An investor in an index-linked carbon bond receives an excess return if the issuing country's targets are not met. For example, an extra percentage point of interest for each €1 that CO2 emission certificate prices are below target or an extra percentage point for not achieving renewable percentage targets.

Using an index-linked carbon bond, investors can hedge projects or technologies that pay off in a low-carbon future because, if the low-carbon future fails to arrive, the issuing government winds up paying investors higher interest rates on government debt.

Index-linked carbon bonds eliminate the one risk that differentiates clean tech projects from other energy projects – the uncertainty of government policy actually being directed at a low-carbon future. If governments tell the truth, they get cheap money. If governments are not committed, they pay.

The International Monetary Fund estimates €4trn of debt will be issued each year over the next few years, so scale is limited only by that of government deficits, not a big limitation at present. Any government (supra-national, national, state, province) could issue index-linked carbon bonds without the need for a global initiative. Documentation would be simple. Most existing government treasury mandates already allow for these types of instrument.

