Risk and Reality – decision making in an uncertain world

John Kay

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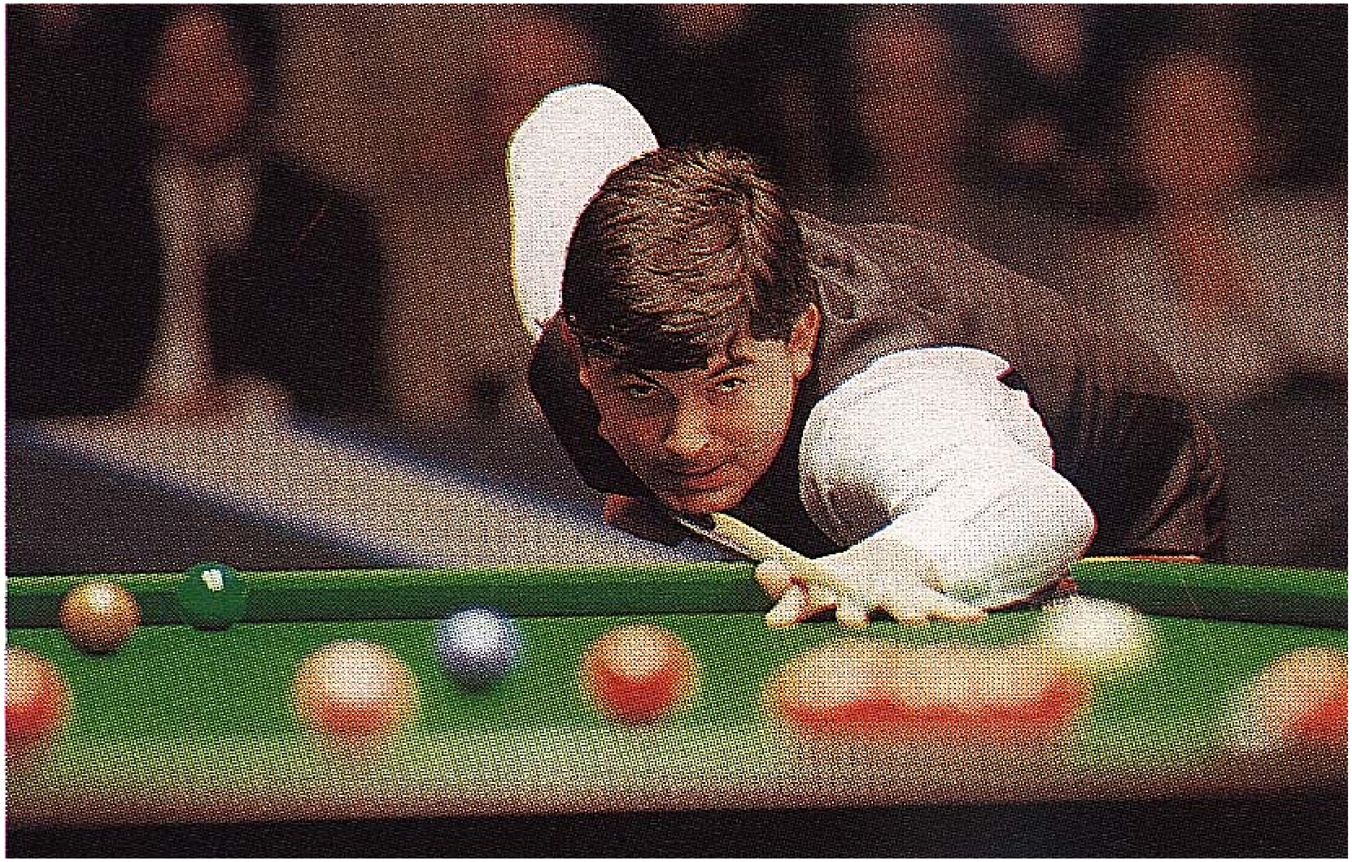
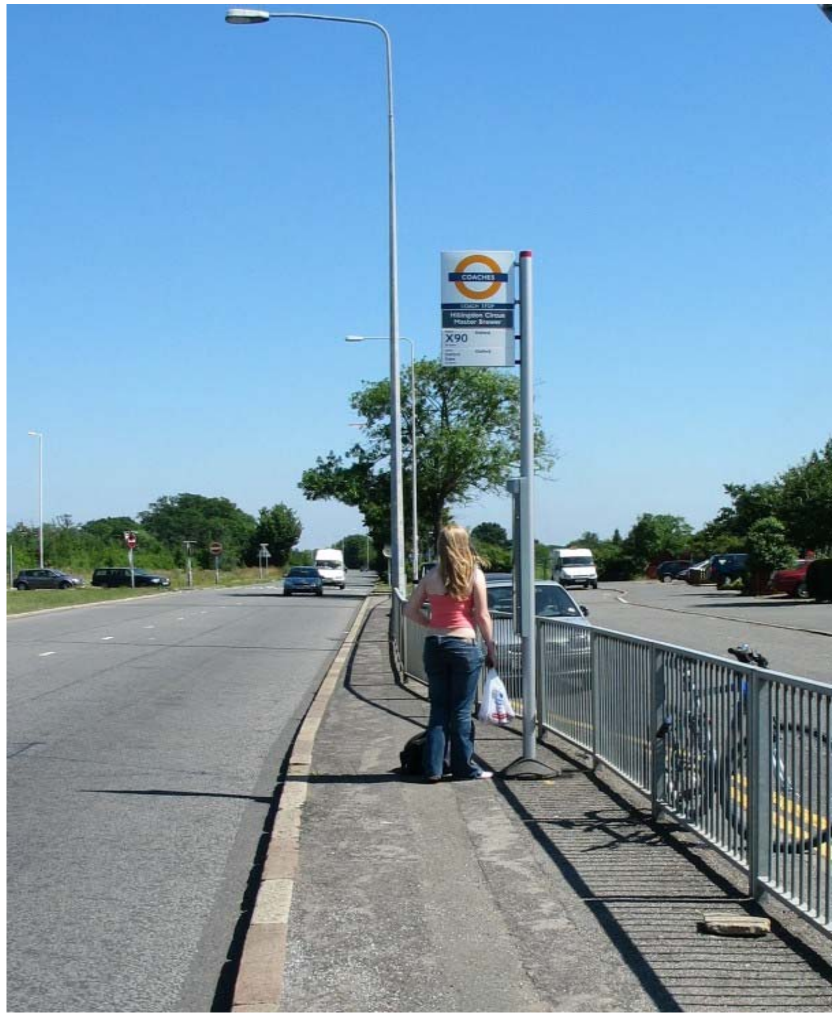


Observing that markets were 90% efficient, they concluded that markets were always efficient. The difference between the two propositions is night and day.

Warren Buffett

JOHN KAY

www.johnkay.com



The standard model

Think probabilities

Employ subjective (personal) probabilities

Update them for new information in Bayesian manner

Judge risk processes by their expected value

Judge outcomes not processes, mind your overall portfolio

The CAPM is the equilibrium reached by agents behaving in this way.

Behavioral finance

Emphasizes observation not normative rules

Identifies systematic deviations from SEU principles

Regards these as stupid mistakes

May be reabsorbed in mainstream theory

Thesis

SEU is a useful, but not the only or necessarily best approach to risk

Its value is in an environment characterised by risk rather than uncertainty

This is true of some, by no means all, financial services activity

If behaviour is persistent, it is presumptively not irrational

The assumption that markets represent SEU based equilibrium is not plausible or supported empirically

A bird in the hand

Implication

The "cognitive errors" of behavioral finance are artifices of the experiments

Much financial services activity has essentially this character

Meet Linda

Linda lives alone, read social history at Anglia Polytechnic University. She was active in organising demonstrations against Shell over the Brent Spar Affair.

Which of the following do you think is more likely?

Linda is a bank manager

Linda is spokesperson for the Animal Liberation Front

Linda is a bank manager who is active in the feminist movement

Two approaches to risk analysis

The 1920s stand-off

Risk	Uncertainty
Probabilities	Likelihoods
Bayes/SEU	Degrees of belief
Portfolio theory	Narratives
Ramsey	Keynes
then	
Savage	Knight
Markowitz	

Keynsian/Knightian uncertainty

By uncertain knowledge I do not mean merely to distinguish what is known for certain from what is only probability. The sense in which I am using the term is that in which the prospect in which a European war is uncertain, or the price of copper, or the rate of interest in twenty years hence or the obsolescence of invention or the position of private wealth owners in the social system in 1970. About these matters there is no scientific basis to form any calculable probability whatever. We simply do not know.

J M Keynes, *Treatise on Probability, p.149-150*

Standards and burden of proof

Criminal standards	Beyond reasonable doubt
Civil standard	On the balance of probabilities The preponderance of the evidence

The burden of proof lies with the prosecution/plaintiff

The rodeo problem

There are 1000 seats for the rodeo

499 tickets are sold

There is a hole in the fence, and the rodeo is full

Professor [Max] Planck, of Berlin, the famous originator of the Quantum Theory, once remarked to me that in early life he had thought of studying economics, but had found it too difficult! Professor Planck could easily master the whole corpus of mathematical economics in a few days. He did not mean that! But the amalgam of logic and intuition and the wide knowledge of facts, most of which are not precise, which is required for economic interpretation in its highest form is, quite truly, overwhelmingly difficult for those whose gift mainly consists in the power to imagine and pursue to their furthest points the implications and prior conditions of comparatively simple facts which are known with a high degree of precision.

— John Maynard Keynes

'Alfred Marshall: 1842-1924' (1924). In Geoffrey Keynes (ed.), *Essays in Biography* (1933), 191-2