So I've read Taleb's Black Swan*....twice…..now what?

* The Black Swan – The Impact of the Highly Improbable, Nassim Nicholas Taleb 2007, Penguin Books

Ron Wells considers what Taleb's musings may mean
for the Credit Risk Management profession

The Black Swan is an enthralling and instructive read for anyone concerned about future risk; such as any Credit Risk Executive or Chief Financial Officer. A thorough study of this work and its predecessor Fooled by Randomness is highly recommended. Nassim Nicholas Taleb (NNT) draws together a large number of references and anecdotes to illustrate his points. He repeatedly attacks the received wisdom of those who model the future and who, being lulled into a false sense of security by the elegant mathematics of their models, are repeatedly surprised when the future does not adhere to their script.

In essence NNT persuades the reader that the most impactful social and technological changes – the changes that will drastically alter the course of future history - cannot be predicted since they are 'unknown unknowns'. Such events – which he calls Black Swans – will happen for the first time so cannot be imagined in advance, and cannot be predicted by models that extrapolate forward the past. The past cannot be a basis on which to predict the future; ask any turkey just before the butcher's cleaver falls if he thought his today would be any different from the preceding 1000 days when he ate heartily and potted around a garden or dozed in the sunshine….

With such thoughts in mind, NNT is particularly critical of the use of past trends and volatility statistics to model future risk probabilities. The omnipresent use of Value at Risk (VaR) and Credit Value at Risk (CVaR) calculations to 'predict' future losses, with 95% or 99% confidence, NNT shows to be particularly dangerous; as has proved to be the case time and again. Yet the majority of academics and the decision makers they train persist in the use of VaR and CVaR - by inference bowing at the Alter of the 'bell curve' – because 'The demand for certainty is one which is natural to man…' (Bertrand Russell) even if that certainty is built on mathematical models that cannot predict pivotal events. Thus building on sand, trusting in false predictors, all of the unconverted – those who chose to ignore Benoît Mandelbrot's theories as expounded by NNT in The Black Swan – created the instruments and conditions that caused the global financial firestorm (Credit Crunch) that followed the collapse of US house prices and the bankruptcy of Lehman Brothers.

NNT refers to the 'bell curve' as 'that great intellectual fraud'.

This is all very interesting however the burning question after reading this seminal work is; what does it mean for someone in the business of Credit (Performance and Payment) Risk Management?

The Black Swan reaches its conclusion in Chapter 13 – six chapters before the end – where NNT offers advice for dealing with Black Swans first in respect of 'small matters' and second in respect of 'large and important decisions'.

Small Matters

In this respect the advice is to go with your instinct in, for example, planning a picnic next Sunday, or relying on your train to be on time on Monday, depend on your DNA programming and accept the risk of being fooled by the future. If you take any other approach you will find it impossible to make even the smallest decision; a condition that has been referred to as 'analysis-paralysis'.

It is true that no one can know the future – since it is evident that the future has not yet occurred – but for the most part we have to 'take a risk' and plan regardless; we must count on our ability to adapt to minor unexpected inflections should they occur.

Large and Important Decisions

Decisions such as; whether to agree to a fixed price commodity swap maturing in monthly tranches over two years, commencing one year in the future. Similarly decisions like; whether to deliver a cargo of commodity FOB (Free on Board) against the buyer's promise to pay 30 days after transfer of title, call for a different approach.

Here it is useful to quote NNT directly:

'Knowing you cannot predict does not mean that you cannot benefit from unpredictability. The bottom line: be prepared! Narrow-minded prediction has an analgesic or therapeutic effect. Be aware of the numbing effect of magic numbers. Be prepared for all relevant eventualities.' (The Black Swan, NNT 2007, Penguin Books, page 203)

Black Swans can be positive as well as negative, depending on your circumstances; Black Swans are also 'scalable', meaning the consequences positive or negative, have unknown limits.

Prior to the earthquake that struck Kobe in 1995 the Japanese authorities channelled most resources into efforts to predict when and where earthquakes would strike. Kobe proved that predicting every quake is an impossible task. The city was devastated by an unheralded quake, many buildings and an elevated expressway collapsed, and firestorms raged. As a result the authorities switched resources to focus on preparation for dealing with earthquakes when they occur, wherever they strike. This has led to a two prong approach, firstly to stepping up efforts to ensure that built structures are able to withstand sever quakes, without suffering structural damage, and secondly to improving the ability of local authorities and emergency services to deal with the aftermath of a quake.

Beyond preparation, NNT suggests what he calls the 'barbell strategy'. This is a strategy which in one aspect is extremely risk averse and yet at the other end wildly risky; thus opening one up to all of the possible upside if a Black Swan event occurs, while simultaneously protecting against suffering unbearable losses.

Thus in 1976 when Dame Anita Roddick was struggling to establish her then somewhat eccentric Body Shop business, her friend Ian McGlinn invested £10,000. McGlinn probably mentally wrote off that amount as an amount he was prepared to lose; at the same time he opened himself up to the possibility that Roddick might succeed. As it happened Roddick succeeded beyond anyone's wildest dreams, and McGlinn's investment turned into many millions of pounds when L'Oreal bought the Body Shop for £652 million in 2006.

In short, NNT suggests that one should;

i. 'learn to distinguish between those human undertakings in which the lack of predictability can be (or has been) extremely beneficial and those where failure to understand the future caused harm';
ii. 'invest in preparedness, not in prediction'. Chance favours the prepared but do not prepare for something precise, Black Swans cannot be predicted; and
iii. 'seize any opportunity, or anything that looks like an opportunity' because opportunities are rare, very rare (pages 206-209).

ENOUGH BACKGROUND ALREADY…..
WHAT DOES ALL THIS MEAN FOR CREDIT RISK MANAGERS?

Counterparty Credit Risk and the Black Swan

The Company:
Credit Risk Managers need first to examine their own business to establish if and to what extent it is vulnerable to a negative Black Swan event. Remembering that one of the two prime objectives of the credit management activity is to protect the company from failure, this first step is essential for the determination of the risk appetite of the company. That is the type of risks and quantum of risks the company could bear to carry, without failing, should a negative Black Swan event occur.

This would indicate the exposure levels above which third party collateral or credit insurance would have to be obtained in order to secure additional profitable business; the latter being the second prime objective.

The Counterparties:
Standard or traditional counterparty analysis should be preceded by careful consideration as to the counterparty's vulnerability to negative Black Swans and its exposure to positive Black Swans.

This should lead to an analysis of the counterparty's business model, and its market environment, to enable an assessment as to its ability to cope with the impact of any negative Black Swan; that is its ability to 'roll with the punches' and survive.

Multiple scenarios – future stories – should then be developed around each particular counterparty (or each portfolio of like structured counterparties) to establish possible extreme downsides. This does not involve the calculation of a VaR, or 'bell curve' based potential future exposure (PFE) built on historical statistics resulting in a number-of-little-value; rather it requires the imagination of possible futures given the occurrence of an unknown 'extreme impact' negative event in each case.

Against worst case scenarios it is then necessary to imagine how particular counterparties may cope; how might they adapt, what resources would they be in a position to access to ensure survival, would they be in a position to perform under their contracts in such circumstances?

The performance of these analytical steps, and the answers to the questions posed, should provide a Credit Risk Manager with a useful guide as to how much counterparty exposure to carry unsecured and how much to decline or transfer to a third party.

Additional Reading:

Please refer to articles found at the following addresses for more discussion on the need for and plausible use of scenario planning:

http://www.barrettwells.co.uk/credit_2010.html
http://www.barrettwells.co.uk/performance.html
http://www.barrettwells.co.uk/customersfail.html
http://www.barrettwells.co.uk/imagination.html

Ron Wells is the author of ***Global Credit Management - an Executive Summary**,* published by John Wiley & Sons Limited. This is a concise but authoritative work that exposes the power of credit, see www.barrettwells.com/gcm.html for details. The **Chinese** version of this book has now been published, it is an ideal gift for Chinese business executives of all types; Chief Executives (CEOs), Chief Financial Officers (CFOs), Treasurers, Credit Managers, Entrepreneurs starting or running their own businesses, and students of business practice preparing to face the tough challenges of business management, see www.t3plimited.com (English) or www.t3plimited.cn (Chinese) for details. **Ron** is an active member of the International Energy Credit Association (IECA) and the Association for executives working in Finance, Credit and International Business (FCIB). His free access international credit management web site www.barrettwells.co.uk is highly regarded as a valuable resource for those interested in trade finance and business-to-business credit management. **Ron's** email address is: ron.wells@barrettwells.com.


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