



GLOBAL riskupdate

The quarterly independent risk review for banks and financial institutions worldwide

JANUARY 2012

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The Myth about Exchange Traded Derivatives

Casino v. Jungle

Peter J Hughes FCA, is a Chartered Accountant, banker and risk management expert with more than 30 years experience in both the developed and emerging markets (UK, USA, Germany, Brazil). In this article he uses the metaphor of a jungle, a village and hunters to describe the changed banking environment and to expose the flawed interpretation of Value-at-Risk (VaR).

Politicians seem to favour the term 'casino' when referring to the more risky activities undertaken by investment banks. But investment banking is vastly more serious and complicated than the casino metaphor implies. A better one is 'jungle'.

The Banking Revolution

In the 1990s a revolution in banking was underway. New frontiers were being explored in an area of endeavour dubbed 'financial innovation'. Up to that point, bankers who had successfully globalised their businesses were thriving on unusually fat credit spreads earned primarily through lending the petrodollars channelled through the Middle Eastern oil trade to so-called less developed countries (LDCs). But as these countries defaulted or announced their moratoriums the fat spreads came under pressure and began to evaporate.

Around this time regulators were flexing their muscles. In 1988 the Basel Committee on Banking Supervision published its first capital accord that introduced minimum capital requirements leading to heightened focus on the cost of capital when pricing credit products. It was also at this point that LDCs became financially savvier and this, combined with their greater political stability and accelerated investment in their own infrastructures, allowed them to go to work on removing the 'L' from their 'LDC' label.

As credit spreads dwindled, banks whose business was

biased towards the depositor / borrower dynamic became unsustainable. New directions were called for. Mechanisms were needed that allowed banks to channel financial resources according to the needs of clients and national and global economies but in a way that avoided occupying banks' balance sheets and incurring the concomitant regulatory capital charges. The new direction that was found involved repositioning clients as issuers and investors of capital rather than the more traditional depositors and borrowers.

A vital component in this new mode of banking was financial risk management. And so the derivative came into being whose effect was to migrate financial risks from issuers and investors to the banks where yet another profit opportunity was created as trading schemes were devised that traded risk management products and related risk positions.

With this newly found plethora of innovative financial instruments and trading schemes at their fingertips, banks found new ways to perform financial wizardry both for their clients' and their own accounts. Such wizardry was more than a means to an end. It became an end in itself as bankers applied it in the creation of increasingly sophisticated and complex forms of financial instruments, risk intermediation and trading schemes. It was not long before the burgeoning complexity of these new directions started to outrun the ability of regulators to regulate it, the accountants to control and account for it and boards of directors to understand it.

Our jungle bank had been created.

The Jungle Bank

'Jungle' implies a vast area that is undeveloped and uncivilised and full of threats that are both known and unknown. The security of a village in the middle of a jungle can be enhanced by clearing an area around it and constructing a perimeter fence from which it can monitor and control threats emanating from the jungle. The village's defences can be progressively improved by dimensioning them according to the threats observed over time. But the fact remains that risk management can only operate from within the perimeter fence... it is not possible to risk manage the jungle.

Casino v. Jungle

In order to survive the village needed food so, once in a while, its hunters went deep into the jungle where they set their traps and captured and slaughtered the animals and brought them back to the village. Once they were beyond the perimeter fence they became exposed to threats not previously observed.

In our jungle metaphor, the village's hunters represent capital which is put at risk to ensure survival.

But the hunters provided more than just food when they returned with treasures beyond everybody's wildest imagination for which they were richly rewarded. There was limited interest in knowing where these treasures came from or what risks the hunters took to obtain them. For their part, the hunters preferred to maintain a shroud of mystery over their activities.

And then disaster struck. After many years of providing the village with food and fabulous wealth the day came when the hunters went into the jungle and didn't return.

Value-at-Risk (VaR)

As investment banking flourished in the 1990s bank executives awoke to the realisation that conventional accounting systems were simply not designed to account for and report the loss potential inherent in these new risk management products, deals and

trading schemes that accumulated and redistributed financial risks among issuers, investors and trading counterparties. After all, accounting focuses primarily on valuation and, consequently, produces an inherently static representation of financial condition.

A common measurement framework was required that, when applied to a diverse set of risk positions, was able to produce consistent, comparable and dynamic measurements of exposure to risk. The answer was Value-at-Risk (VaR). VaR applies statistical theory in the dynamic modelling of current risk positions, historical data and macro-economic factors to determine the probability and severity of likely future loss experience. VaR was applied not only in the day-to-day management of risks it was also adopted by the regulators under the auspices of Basel II to provide the basis on which minimum capital requirements and corresponding capital adequacy were determined.

The language of VaR in a trading environment is typically that of statistically modelling to a 99 percent confidence interval over a one-day horizon. In other words, financial modellers were asked to look for the largest loss that is likely to occur over 100 trading days in the belief that trading positions typically have a one-

day duration and a 99 percent confidence interval would provide a sufficiently representative data set to arrive at statistically valid conclusions.

Flawed Thinking

But this thinking has a major flaw as VaR is only valid relative to observed threats. It didn't consider the unknown, unobserved threats that hunters were exposed to when they were in the jungle. In retrospect there is a realisation that bank executives were being given false comfort in the belief that VaR was advising them of the largest likely loss that could occur in 100 trading days when a more appropriate interpretation would be precisely the opposite. VaR represented the minimum likely loss.

It is true that risk managers and regulators require VaR models to be complemented by programmes of stress testing and scenario analysis with a view to dimensioning additional capital buffers to protect against any unobserved threats. But if over many years hunters returned with ample food and riches the conclusion tended to be that the jungle must be an unthreatening and friendly place.

But now we know differently.

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