Back-to-basics on the defensive: Now what for the risk profession?

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Abstract Recent problems in financial services have brought basic risk questions back to centre stage for management and policy-makers. Like millions of investors, governments and central banks face the common risk-growth trade-off. Financial institutions, in addition, are experiencing an intense soul-searching period. They had better prepare convincing answers quickly because the post-problem witch hunt by the media and politicians is in full swing.

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As is customary during periods of duress, financial services insiders and policy-makers have been quick in blaming outside 'exceptional' circumstances for the current unfavourable situation. Once again, the 'illusion of liquidity' blamed for both the 1987 stock market crash and the 1998 Long-Term Capital Management demise has been invoked as one of the lapses resulting from the dogmatic reliance on quantitative risk models. As policy-makers come up with proposals to meet the familiar populist call 'to do something', the risk industry's responsibility to contribute to the forthcoming policy and regulatory developments extends way beyond simply safeguarding its own reputation.

Recent adverse developments at leading investment banks have put the spotlight on financial risk management in at least two major respects:

- From a systemic point of view, the question of how much risk the market and the economy can withstand is back to centre stage. In addition, free-market purists would argue that the key rules of the game are being tweaked for political expediency (more on that shortly).
- From a micro point of view, the opaque price discovery mechanisms that stand as the flipside to innovation and customisation in derivative products raise a question mark over the extent to which the financial system can rely on banks' top management.

As both these aspects will have a critical bearing on shaping the trading industry in the years to come, this paper will address each one in turn.

The current picture can be likened to an investor who is reviewing the strategic asset and risk allocation of their portfolio:

- first, they decide how much risk they are prepared to assume in the portfolio and how they want to allocate across asset classes;
- secondly — assuming that they can allocate to active portfolio managers only — they perform due diligence on each manager and decide whether or not to hire them and how much risk capital to allocate.

Replace 'investor' with 'policy-makers', 'portfolio' with 'economy' and 'portfolio managers' with 'financial institutions' and this gives a reasonable representation of the decision at hand.

Any rational investor will understand how extremely difficult it is to improve performance without exceeding the stated risk limits. The stricter the latter become, the lower the expected return should be. The financial services industry has to drive the regulatory and policy debate as actively and as early as possible. Otherwise, there is a major danger that the simple risk–return relationship above may be swept aside for political convenience. Risk has to be managed — and maybe regulated — better, but the way in which the risk debate will be framed has a decisive impact on future questions and the resulting decisions. A strong body of empirical evidence in behavioural economics documents the importance of context dependence in decision making. Accordingly, agreeing the context is at least half of the battle and a very important part indeed.

At present, the risk limitation argument — irrespective of future consequences — appears to be in the front seat argument. This is understandable, politicians and people alike are as scared as a wounded investor who just wants to pull their capital out of a declining market. Further, of the consequences of a dramatically reduced risk profile — mostly in terms of lower expected future growth in the economy — there has been little analysis to date.

A famous experiment in behavioural economics illustrates the importance of framing beyond doubt.[1] Using a medical therapy for a disease that would kill 600 people if left untreated, Tversky and Kahneman asked two sets of subjects to decide between two alternatives:

- The first set was told that therapy A would definitely save 200 patients, but that the probabilities of all or none of the patients being saved would be one-third and two-thirds respectively.
- The second set was told that 400 people would definitely die as a result of therapy A, but that the probabilities of none or all of the patients dying would be one-third and two-thirds respectively.

Thus, 72 per cent of the respondents in the first set accepted therapy A. Despite obtaining exactly the same outcome (400 patients dead), only 22 per cent took therapy A in the second set. Faced with the possibility of taking a certain loss of 400 patients, the respondents in the second set preferred to take their chances and go for broke (two-thirds probability of losing all patients). Thus, the researchers found two very different answers for the same problem.

The study above illustrates decision-makers' aversion preference for probability-adjusted losses over sure losses — a familiar phenomenon in financial markets and decision economics. How about a real-life application? The following is an excerpt from a note issued by the US Securities and Exchange Commission in early March. It concerns the treatment of securities — including the nefarious asset and mortgage-backed securities — on the balance sheet:

> 'Fair value assumes the exchange of assets or liabilities in orderly transactions. Under SFAS 157, it is appropriate for you to consider actual market prices, or observable inputs, even when the market is less liquid than historical market volumes, unless those prices are the *result of a forced liquidation or distress sale*. Only when actual market prices, or relevant observable inputs, are not available is it appropriate for you to use unobservable inputs which reflect your assumptions of what market participants would use in pricing the asset or liability. Current market conditions may require you to use valuation models that require significant unobservable inputs for some of your assets and liabilities. As a consequence, as of January 1, 2008, you will classify these assets and liabilities as Level 3 measurements under SFAS 157.'[2]

The potential for abuse in the adoption of the fire-sale argument by financial institutions opens a most worrisome Pandora's box going forward. Simply put, proposals such as the one above create the potential for banks and financial institutions to circumvent mark-to-market and hide losses. How effective can risk management become without the solid underpinning of mark-to-market? While this is not a forum for free-market dogmatism, what is the point of mark-to-market when markets rise and mark-to-model — or worse 'mark-to-judgment' — when they drop?

Moving on to the micro side of how risk is managed inside financial institutions, the industry faces a curious paradox. On one side, the impressive advances in quantitative techniques over the last decade have often been quoted as one of the most visible signs of top-flight risk management. On the other, the unfortunate developments that resulted in major portfolio losses — most notably on the credit side — call into question the supposedly 'strong management' paradigm often boasted by the industry's leaders. Consider the following:

- The process to bundle mortgages and other credit-risky instruments of questionable quality has witnessed credit scoring and other common statistical techniques largely displacing traditional individual diligence and credit approvals. Ditto for the largely blind reliance on credit ratings.
- All the questionable quality attributes of collateralised debt obligations notwithstanding, the major failures in the basic asset-liability management (ALM) process of the structured investment vehicles (SIVs) of major dealers has been the trigger of the crisis since last summer. Readers may indeed recall how these SIVs suddenly found themselves unable to roll over their commercial paper and other sources of short-term funding that were used to finance their security inventory. The dealers behind these SIVs have supposedly well-honed ALM processes to

manage the maturity mismatch between assets and liabilities — better known as the 'AL Gap'. It is then legitimate to wonder why the SIVs were left exposed to this very basic liquidity risk. Under normal circumstances, major dealers can usually reduce it or eliminate it at a relatively modest cost.
- The substantial inaction displayed by many of the most prestigious dealers exposes the critical difference between *risk management* and *risk reporting*. *Knowing* is not synonymous with *managing*. No help comes from the confusing title jargon in the risk industry and the widespread practice of having risk management report to the CFO rather than to the CEO directly. Putting oneself in the CEO's shoes for a moment, imagine the difference in informational impact between receiving a risk report on its own *vis-à-vis* something that is buried among tens of pages of accounting and budget information. As few or none of the above risks presented insurmountable reporting or computational difficulties, top management cannot invoke the common 'we did not know' excuse. Rather, the current situation shows the fallacy of the 'top management is aware of the risks and knows what to do' argument that is often used during good times.

It is ironic to see how a basic ALM mishap — reminiscent of the troubles that savings and loan banks faced in the 1980s — humbled many of the most glamorous houses in today's finance and their quantitative arsenal. But, aside from the traditional dilemma of how to manage the balance between business growth and control, the issue at hand also shows the unwelcome side effects of poorly managed specialisation and over-compartmentalised skills. The ALM blind spot in the SIVs demonstrates how easily trendy quantitative and IT issues can make risk management ignore more prosaic — but still critical — funding or ALM concerns. The latter will probably have far less marketing appeal — both internally and externally — but can still sink the ship. As an analogy for those readers who are interested in modern weaponry, please consider the success of reconnaissance drones over the last few years. These planes have a size and speed comparable to a radio-operated toy plane, yet they can baffle even the most sophisticated anti-aircraft defences — missiles included. An old-fashioned machine gun would likely be more effective. The same applies to today's financial institutions: unmanaged vertical specialisation can leave a firm exposed to major — yet very simple — risks. Simply put, one can miss the forest for the trees.

What to do now? The issues at hand have far more to do with relatively simple management and organisational topics than with arcane risk modelling or quantitative issues. The relatively basic issues at hand make a strong industry response most urgent, as the glaring consequence of further inaction is a regulatory crackdown — all the more likely in response to growing populist pressure on politicians to 'do something'. As in similar unfortunate instances in the past, the crisis does not mean that risk management is useless, but that better risk management is required.

The financial services industry should strengthen its own (real) risk management standards first in order to mend its shaken outside credibility.

Overly strict regulation and excessive curbs on the systemically acceptable risk profile carry a large prospective price in terms of missed growth opportunities for the USA and other global economies. As the spectre of a Japanese-style recession looms large over the popular psyche in the USA, now is the moment to raise this issue.

As was the case in the early days of the profession in financial institutions, risk management should be granted a direct reporting line to the CEO. Several years of direct senior trading experience should be a virtually compulsory background for a chief risk officer. The upgrade of such a role would be consistent with the strategic role that risk management has to play and would de-emphasise the recurrent association with middle and back-office and the associated IT and production tasks. Recent developments prove how deadly it is to confuse the role with other accounting and reporting tasks. Under an overarching objective of maximising speed in decision making and responsibility to perform trades aimed at eliminating excessive risk concentration, the new risk management function would be a small commando operation with as little involvement as possible in reporting and production tasks. Independent reporting for regulatory purposes is of course necessary but should not be confused with decision making and could be easily performed by other independent units, such as product control.

Inside risk management, a matrix-type organisational structure could be devised to manage the growing complexity of organisations. A vertical structure by function would be better suited to manage specialised tasks of considerable computational and theoretical complexity such as, for instance, model validation. A horizontal structure would be more adequate for issues, such as regulatory capital or funding, that cut across the organisation.

As every process is a bet on the people who implement it, cross-training of staff in both 'vertical' and 'horizontal' tasks is a critical ingredient to defeat the silo-based mentality and setup at the root of many of the recent problems. This would have the added benefit of reducing the operational risk associated with risk management staff and grooming people for higher responsibilities in the organisation.

Last, but not least, the liquidity lesson from past crises has — once again — been forgotten. The ability to price and model a product may facilitate its liquidity and marketability under fair weather conditions but is no substitute thereof. Similar fiascos in the past — most notably the failure of portfolio insurance in the 1987 Wall Street Crash — have underscored the illusion of liquidity.[3] Risk managers retain a fiduciary responsibility towards top management, shareholders and ultimately the market to keep pressing on this point and enforcing it by requiring conservative reserves where appropriate. These should be based on long-term market experience and insight, rather than on accounting consistency. The financial services industry's relentless drive for packaging and distribution in large sizes may have a lot to do with this oversight. As in countless other real-world instances,[4] rare worst-case scenarios that were ignored as unreasonable, due to internal and external marketing and political considerations, come back with a vengeance in tsunami-like fashion. While the risk industry attempts to hide behind the common 'one-in-a-billion-year rare n-standard deviation' instance, the recurrence of catastrophic non-standard market losses over the last 20 years exposes the fig leaf nature of the argument. Poor risk standards, resulting from excessive and unrestricted influence of sales people and obsessive focus on accounting performance, may bring short-term business but their disastrous results are questionable ingredients for the long-term marketing focus and franchise that management like to quote during upturns. The evaluation and promotion of risk staff based on their indirect support of sales (irrespective of whether it is labelled as *understanding* or *commercial sense*) bears an eerie resemblance to the notorious independence issues that research departments of major investment banks were forced to confront a few years ago. Risk and sales are separate disciplines and ought to remain so. Please do not confuse risk and front-office support!

References

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