

The Future of Financial Risk Management: Lessons

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Lessons Lessons ... more of the same

- Michel Crouhy, 2001, in an NBER presentation points out to risk measurement, model risks and to the integration of (highly dependent) markets, credit and liquidity risks as essential factors to reckon with in the FRM. In addition, Crouhi, indicates to dependence and contagion risks underlying financial runs in the Asia financial crisis as well as to evolving risk trends in banks' trading, seeking to transform risk in value. This process has become the dominant factor in the MBS and credit derivatives debacle in 2008.

At a Courant Meeting (November 30, 2009)

- **Steve Allen:** Failure of financial regulation, the limits of VaR and in particular failure of the Group of Thirties (for stabilization),
- International regulation is needed (albeit an unlikely prospect in multi-polar and competing financial markets).
- Latent risks striking whole portfolios at the same time and mostly unpredictable may have both substantial direct and collateral damages.
- These risks, unlike statistical dependence risks, might in some cases be accounted by VaR models (although there is much evidence to the contrary).
- Techniques such as Copula, commonly practiced have also failed to assess the effects of dependence since such techniques do not appreciate the intricate and causal facets of dependence (for example, application of the KMV model).
- As a result, VaR has been largely discredited, leading risk managers to turn to qualitative stress-testing,

The usual culprits

- Exotic derivatives with prices that are not market variables whose price history can be observed (and so are not suitable for inclusion in a VaR analysis if FRM is all about VaR).
- If instruments have no liquid markets, valuation models are called that require some inputs which cannot be extracted from liquid market prices.
- In other words, since risks cannot be traded away, they have to be assumed or shared.
- Unconscious insurance coverage, as was the case with AIG covering financial risk, has implications that are likely to provide additional lessons to the insurance profession.

- Engle: Recognize the counterparty risks of incentive structures (a manager's moral adverse selection risk) as well as failure of risk measurement that underestimates both short and long term risks (risks that financial markets have problems dealing with).
- Engle indicates that leverages risks were incurred by lending/ borrowing in a low volatility environment; trading in structured products such as CDOs produced with apparently low risk, both of which were "surprised by correlations risks".
- These risks implied in orchestrated "high prices" could not define the correlation or the latent-black swan effects.
- Insurance purchased on these positions made the risks even lower as long as the insurer had adequate capital. When these assumptions were violated ... risks hitherto not recognized came home to roost large losses.

- Pundits such as Alan Binder (The New York Times, January 25, 2009)
 - Excess leverage,
 - Unregulated credit risk markets,
 - Banks intermediation allowing them to assume excessive risks,
 - Foreclosure management and the
 - Misuse of the TARP moneys as additional culprits.

- Binder called for greater transparency and greater regulation,(potentially impossible)
- The fact is that risks are complex because of their numbers, their intricate dependencies and to some, they are unpredictable. (This is most likely to remain the case)

- Rahl:
 - History does not repeat itself;
 - Risk does not disappear;
 - There is no free lunch;
 - Liquidity matters very much and can change unexpectedly;
 - Complexity induces its own risk;
 - Stress testing needs to focus on correlation assumptions;
 - All AAA ratings are not clear;
 - Buying credit exposure from party exposed to the same risks is dangerous;
 - Funding long terms credit with short terms credit does not always work, etc.

These lessons are also noted by Ben Golub et al (2010)

- The credit crisis has clearly demonstrated the importance of a strong, independent (and institutionalized) risk management function.
- It has also revealed the inadequacy of many standard methods in quantitative risk management and called into question the efficiency of markets in general.

To face an “uncertain financial future, Golub et al. (2010) suggest eight principles for institutional financial risk management:

- Risk management requires institutional buy-in.
- Alignment and management of institutional interests are critical to risk management.
- Institutions need an independent risk management organization with strong subject-matter expertise.
- Institutions need to understand their fiduciary responsibilities to their clients.
- While a top-down perspective is necessary, a bottoms-up risk management process is vital.
- Institutions need to get portfolio managers to think like risk managers.
- Risk models require vigilance and skepticism.
- Institutional risk management does not mean risk avoidance.

At more specific levels

- Institutions must recognize the paramount importance of liquidity;
 - Investors in securitized products need to look through data to the behavior of the underlying (“seeking to better understand risk causality rather than correlation”, my addition);
 - That certification is useless during systemic shocks;
 - And that markets’ appetites for of risk can change dramatically.
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- Both these institutional and market-specific factor, lead to a greater need for a “risk policy”. **Of course, (my addition), a policy risk based on predictable risks is self defeating, as unpredictable risks are, by far, the risks that matter most.**

Some conclusion regarding lessons

Robustness and multiple sources of risks

- Traditional financial risk management techniques are fueled by a need for “certainty” combined with a misconception and intolerance of ambiguity that seeks to simplify-and oversimplify, everything.
- In this process, financial measurements and tools seek risk free synthetic models that have no real sense.
- In a world where uncertainty, risk and ambiguity prime, this leads necessarily to misconceptions and to default models.
- The search of certainty , a second best ...robustness

A Partial List of future Concerns

- Finance of the unlikely (and Black Swans) combined with mitigation of the implications that financial markets are not complete (explicitly or implicitly). These may include risk sharing management, managing trading risks and tax avoidance management and counterparty risks. These imply as well that “the markets knows best” is not always true”.
- Managing financial liquidity and its consequential risks, which requires that liquidity—theoretically and empirically, cannot be taken for granted.
- Financial risk recovery, robust design and ex-post financial risk management (with a lesser focus on VaR techniques) to compensate the traditional ex-ante financial approach to risk management. A resurgence of “actuarial-statistical” techniques for testing financial valuation approaches.

- Confine the growth of financial IT risks (information technology). IT finance and its risks may (in a global financial world) redefine the financial landscape of the future. For example, a financial landscape with more wealthy retirees that manage their own accounts, rather than trusts big banks, or a financial networked world where regulation will in fact be more constraining and ineffective, trades hidden and taxes avoided.
- A finance where safety nets for financial institutions that produce risks too big to bear and therefore too big to fail, will fuel ever larger institutions to be too big to fail—free to “pollute” financial markets with risk externalities and to resist any effective regulation.

- The flight from risk, with a consequential flight from investments will lead to a finance of trades where the essential concern is not risk but “when to buy and when to sell”. Financial risk management which by its “nature” forward looking, is essentially becoming irrelevant.
- “Integrated financial risk management” (IFRM), while providing a greater opportunity for executive financial control may also lead to a further flight from risk and thereby to a decline of finance as we know it.

- Current trends, already point to new perceptions of risks including among many others, “greater individuation of risk” (eg in IT risks, in personal finance, in insurance, in health care aided by advances in genetics etc.); to more common systemic risks fueled by to multi-polar markets in conflict and TBTF firms free to exercise their tyranny etc.. By the same token, in such an environment, Sovereign regulation is likely to ineffective and therefore FRM may be called for to be more robust, responding to the multiple risks that the financial system cannot handle; to more redundancy and greater costs and to a flight from risk for all financial agents. These undermine the proper functioning of financial markets and financial parties and the basic assumptions we make regarding FRM. At the same they provide an appreciable challenge to both the theory and the practice of FRM.