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Lessons from the Credit Crisis: An Investment Practitioner's Point of View

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Executive Summary

Much has been written in the press about the current global credit crisis and the consequences on the real economy. We want to take a step back and take stock of what we think should be the lessons learnt from an investment practitioner's point of view in order to avoid repeating the same mistakes in the next crisis, which will without a doubt come unexpectedly as well. Even though an end to the current crisis does not seem to be around the corner yet, there are some early lessons that could enable financial market participants to be better prepared for the next crisis: first, to have a sound, disciplined and independent "top-down" strategy in place within the investment process; secondly, to recognise at the same time the high uncertainty about the outlook, price for it and prepare for the "worst case" scenario even when it is still a small and improbable risk event. The benefit thereof is not only to be prepared to meet future challenges today, and not tomorrow, but that this protection is also cheap in "good times".

First, know the causes

"Felix, qui potuit rerum cognoscere causas" is a Latin phrase from Vergil, which should be adhered to in any discussion on the lessons learnt: you should know the causes in order to draw the right conclusions. In this respect, we have three observations that we think lie at the root of the current crisis:

First, we see the crisis as a natural result of a prolonged period of generalised and aggressive risk-taking, which happened to have the subprime market at its epicentre. In other words, it represents the archetypal example of financial instability with very serious macroeconomic consequences that follow the build-up of financial imbalances in "good times".¹

Second, the crisis we are currently experiencing is not just due to lax lending practices in the U.S. real estate market and the ensuing losses in the structured credit space, but is also due to the massive increase in the duration and funding risk encountered in the banking sector. Investment strategist Bill Gross of PIMCO calls this the "shadow banking system" with very thinly capitalised "off-balance" conduits and structured investment vehicles (SIV) in the wholesale market.²

Third, ex-post, it is also fair to say that U.S. monetary policy after the dot.com bubble was too lax for too long, allowing excessive liquidity and leverage ratios to build up, driving down spreads and thus possibly creating other bubbles by lowering the "perceived" "risk premium to unsustainable levels.

* The views expressed in this paper are those of the authors and do not necessarily represent those of Swiss Re. The paper is published in order to elicit comments and further debate. G. Fürer and J. Haegeli are both employees of Swiss Re in the function of Head of Asset Allocation and Head of Financial Market Strategy, respectively.

¹ This is also being argued by Claudio Borio, BIS, and described in the BIS working paper No 251: "The financial turmoil of 2007-?: a preliminary assessment and some policy considerations", Claudio Borio, March 2008.

² See PIMCO's Investment Outlook, Bill Gross, January 2008.

Second, learn the lessons

It might be “too early to tell” what the consequences of the global credit crisis are; but there are nevertheless a number of lessons to be drawn in our field of work. The “high level” lessons relate to what we think are issues to be (re-)discussed with a certain cycle as they represent the lessons learnt that could be applied to this and probably also to future crises as well.

i) High level lessons:

Lesson 1: Recognise the high uncertainty, price for it and prepare

We need to recognise the high uncertainty about the outlook and need to change our minds when facts change. We also need to try to model market/asset uncertainty by incorporating all the possible risk dimensions and to work in a disciplined manner in the investment process. The tools for this objective can be achieved by working in a baseline respectively in “alternative” scenarios, in particular “worst case” scenarios. Another key tool, which might be less obvious at first glance, is a “trigger” framework: pinpointing the possible macro, market and policy “trigger” factors is crucial for confirming early on whether the financial market landscape is evolving within or away from the baseline scenario. Laying down these triggers goes a long way in recognising the high uncertainty with regard to the market outlook. Such a “trigger” framework and the discussion/interpretation thereof should also help in making investment decisions, e.g. with regard to the market timing of increasing exposure to risky assets, more transparent and disciplined.

Moreover, we should keep the following points in mind:

- *Structural shifts happen from time to time:* The consequence is not to rely on mean reversion to “normal”.
- *Be prepared for the worst:* In “good times” it is easy and tempting to neglect underlying risk factors. But taking account of the latent risk in portfolios is exactly what we should do, particularly in “good times”: we need to get protection for “tail risk” events. The benefit of this is not only that we are better prepared to meet future challenges today and not tomorrow but that this protection is cheap in “good times”.
- *Have a full risk picture:* Incorporate model risk uncertainty in your estimate, take account of the possibility of products becoming illiquid, not being called and/or being driven by excessive market liquidity.

Lesson 2: Focus on fundamentals: Have a sound and disciplined “top-down” strategy in place

Like all true classics, Kindleberger's famous book “Manias, panics, and crashes: a history of financial crises “remains timely - for better or for worse”³. The take-away from the current, but also from past credit crises, is that the investment process should be guided by a sound, independent and disciplined “top-down” process. A strong “top-down” macro approach should lower the risk of “jumping aboard the mania bandwagon” when everyone else does and lower the risk of being blinded by the “false impression of stability” given by past asset price movements.

Market crises are associated with greed. We should thus have a disciplined and institutionalised “top-down strategy” in the investment process to lower the risk of being blinded. By nature, financial crises are unexpected events. That being said, crises often share common components: as was well described in Charles Kindleberger's book, financial crises follow a natural rhythm of boom and bust; all episodes of financial distress of a systemic nature arguably have at their root an overextension in risk-taking, or in other words market crises are associated with greed.

³ First Edition was published in 1978.

We should also not forget that the risk that builds up in “good times” materialises almost always in times of stress. In a typical credit crisis, balance sheets are masked in “good times” by the veneer of a vibrant economy. This overextension generates financial vulnerabilities that are revealed only when the economic environment becomes less benign, in turn contributing to its further deterioration. The build-up (the sharp increase in domestic credit creation, the de-saving of the household sector) and unwinding of financial imbalances is what the Bank of International Settlement (BIS) terms the potentially “excessive pro-cyclicality”, or “bubble-like”, behaviour of the financial system.⁴

ii) More specific lessons:

Lesson 3: Beware of model risk, know the limitations of financial engineering and model estimates

We should apply a healthy dose of scepticism to model output. In fact, as remarked by Fed Chairman Bernanke recently⁵, the institutions that fared better during the recent market turmoil were those that generally placed relatively more emphasis on validation, independent review and other controls for models and similar quantitative techniques.

In a similar vein, Paul Volcker, the former Fed Chairman, at a Congressional hearing before the Joint Economic Committee in May 2008, said the following:

“One broad lesson, it seems to me, is the limitations of financial engineering, involving presumably sophisticated modelling of past market behaviour and probabilities of default. It’s not simply a matter of inexperience or technical failures in data selection or the choice of relevant time periods for analysis. The underlying problem, I believe, is that mathematic modelling, imbued with the concept of normal frequency distributions found in physical phenomena, cannot easily take account of the human element of markets – the episodes of contagious “irrational exuberance” or conversely “unreasoned despair” that characterize extreme financial disturbance.”

The sharp increase in financial innovation leading to the structured credit boom and high degree of uncertainty in “mark-to-model” point estimates reflect both the limitations of current models and difficulties in estimating key model parameters with any degree of confidence, especially given the short history of structured credit products. Obtaining estimates of correlations of default (e.g. tranches for ABS, geographical area for MBS) is an obvious example.

Lesson 4: Investors should not rely on rating agencies alone

Incentives in the upswing of a cycle were such that the “search-for-yield” in a low interest rate environment outweighed careful risk analysis. While rating agencies are an important and valuable part of our financial system, the way the ratings are interpreted by end-users should also be part of the equation.

Furthermore, we should also keep in mind that rating agency’s grading is all about average loss and not about the probability of large loss. In particular in structured credits, the risk profile can be quite different from that of traditional bonds. As emphasised by the BIS already in 2005, it is common for tranches of structured products with the same expected average loss or probability of default as an individual bond to be exposed to a much higher probability of large losses. Since credit ratings only capture expected losses or probability of default, it can be highly misleading for investors to extrapolate the credit risk profile of these securities from those ratings.

⁴ See Borio, C, P Lowe (2002): “Asset prices, financial and monetary stability: exploring the nexus”, Monetary and Economic Department, BIS Working Papers No 114.

⁵ See Fed Chairman Ben Bernanke speech entitled “Risk Management in Financial Institutions” at the Federal Reserve Bank of Chicago’s Annual Conference on Bank Structure and Competition, Chicago on May 15, 2008.

Lesson 5: There are two disasters in a complex portfolio: Not having a risk system or believing the one you have; thus, complement VaRs metrics

We need to apply common sense in risk management and use multiple measures. You're still not going to always get it right. It's a best guess, nothing more.

More specifically, complement the risk metrics with sound stress tests and correct for the shortfalls of Value-At-Risk (VaR) measures. From 2002 to early 2007, the decline in volatility in the global economy and financial markets was reflected in lower measures of market risk. This encouraged firms to increase their risk-taking, thereby enhancing market liquidity and resulting in even lower levels of volatility. Conversely, shocks in an environment of heightened risk-taking could result in a rapid deterioration of such a benign environment as reductions in risky positions lead to rising volatility and asset correlations, a reduction in market liquidity, and a further retrenchment in risk-taking. Thus risk management tools with too much focus on the recent past can result in a false sense of stability and safety. VaR metrics behave more like thermometers, tracing risk as it materialises, rather than barometers, gauging the likelihood and the possible damage of its future materialisation.

In our view, the remedy thereof is to complement risk metrics with scenario stress testing and, for example, with expected shortfall (ES), which is the conditional expectation of the loss beyond the VaR level.

Lesson 6: Have a stable source of funding and take account of liquidity risk

A key lesson that commercial and investment banks had to learn the hard way (and leaving by nature our industry more insulated from the global credit crisis) is to have a stable source of funding. The structured investment vehicle (SIV) type model of lending long and funding short impaired the global financial market infrastructure as the very short-term funding base collapsed. SIVs did not collapse because of derivatives. SIVs collapsed because of the most fundamental mismatch of liquidity.

In our business, we have the advantage of generating a relatively stable cash flow stream and we are thus not as exposed to the liquidity risk and/or liquidity mismatch as banks. This being said, we should also be very cognizant of the fact that we are not unaffected either under "fair-value" accounting principles: if you have an illiquid asset and you fund it with a long liability, that might actually work. However, mark-to-market volatility still impacts the capital adequacy ratios through the asset side. Thus, in some sense the only real source of liquidity is "cash-flow". Coming back to our business, having a stable source of funding therefore means that the asset management part of the balance sheet has the responsibility to maintain and nourish the high credibility of the cash-flow generating business on the liability side.

Conclusion

Any crisis can help us prepare ourselves better for the next one, if we understand the cause of the crisis and are willing to learn the lessons. The important lessons that we can learn now are twofold: first, we must have a sound, disciplined and independent "top-down" strategy in place within the investment process. Second, we also need to acknowledge the high uncertainty about the outlook, price for it and prepare for the "worst case" scenario in good times, when protection is cheaper than in times of stress.

The Geneva Association introduced a new section dealing with the credit crisis and its impact on insurance on its website www.genevaassociation.org. Articles, papers and further background materials from a variety of sources including The Geneva Association's own production but also prominent contributions from insurance companies, trade associations and other partners about the credit crisis and how it affects the insurance sector are available for free download at: www.genevaassociation.org/Home/Credit_Crisis.aspx.