There is No Free Lunch

by Daniel C.F. Hui

Investing for insurance companies in the United States and Canada is a balancing act. There are numerous restrictions on allowable investments. Portfolio yield is very important, because insurance companies are relying on the investment returns to supplement the operating income. Since the burst of the Internet bubble in 2001, the interest rates fell and stayed low for a number of years. Finding higher yielding fixed income instruments is a tough act as highly liquid instruments tend to provide lower yields than longer-duration assets in a normal interest rate environment. Too much liquidity will drag down portfolio yield.

Mortgage-backed securities (MBS), asset-backed securities (ABS) and their derivatives like collateralized debt obligations (CDO) or CDO-squared provided a welcome respite for institutions seeking higher interest income in the low interest rate environment. Some of these securities and derivatives were marketed as AAA-rated instruments with higher coupons than comparable treasuries. Some firms bought truckloads of these instruments because higher yields were hard to resist, and AAA-rated securities are considered safe investments, aren't they?

This crisis first started with subprime loans and quickly morphed into a credit crisis that eventually engulfed a lot of financial institutions around the world. If a AAA were really a AAA, this crisis would probably have been more contained and localized. As the crisis developed, evidence emerged from the shadows that revealed the questionable quality of some AAA-rated MBS or ABS. Subprime loans were the weakest link. As the credit boom came to an end and the economy slowed down further, the Alt-A, prime and credit card loans were also affected. The subprime crisis is only the symptom of a much larger underlying problem. Both consumers and corporations were over-leveraged. In time, we would find that this is not a strictly U.S. phenomenon.

The foreclosure rate of subprime loans started to increase toward the end of 2006. Borrowers with minimal resources were given loans in the credit boom. Mortgage brokers misrepresented or even forged the income level of NINJA (no-income-no-job-and-asset) borrowers. Additionally, the lower teaser rate of adjustable rate mortgage (ARM) and option-ARM attracted many borrowers with limited resources to invest in a home. As mortgage rates reset while interest rates got higher, these groups were showing signs of stress. The value of MBS, ABS and CDO with subprime exposure was dropping like a stone. Eventually, all securitized products were impacted adversely, and the flow of securitization deals slowed to a trickle.

Underwriting is very important, and actuaries understand that. There are many players in the mortgage securitization market. The investors, who have a direct interest in the performance of the underlying loans and therefore how these loans were underwritten, are far removed from the process. Andrew Davidson of the Andrew Davidson Company suggested that there are six degrees of separation. Investors are left without a clear view or control on how the loans are underwritten. Investors loaded up on AAA-rated MBS, ABS and CDO on the belief that the ratings truly indicated the stated level of credit and that the first loss investors had applied due diligences to the investment process. Trust was misplaced.

The quality of some of the AAA-rated CDO or CDO-squared tranches was questionable as well since BBB ratings could be transformed into AAA using the CDO technology. Indeed, 62 percent of the MBS/ABS tranches that were rated BBB or below were turned into AAA-rated CDO tranches according to an IMF study. This seemed to be a win-win situation for everybody. Now we must ask: Are these securities really AAA-rated?

Securitization is more popular in the United States than in other countries. A glance at the balance sheets of U.S.-based insurers would reveal that this group originates very few, if any, loans now. The Canadian insurers across the border, on the other hand, hold a higher percentage of their portfolio in private placements and commercial mortgage loans than their U.S. counterparts. Further,

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there are Japanese insurers making residential mortgage loans and commercial loans directly. In addition to buying protection, one of the benefits that policyholders could possibly enjoy by buying insurance products is to access the investment prowess of insurance companies. Individual investors generally could not access asset classes like private placements, residential and commercial mortgage loans and commercial real estate. This was the competitive advantage that insurance companies once enjoyed. This is not true any more. Some of these asset classes are securitized in the United States today. Insurers are facing stiff competition from other financial institutions. Securitization has promoted the liquidity in these asset classes but at the same time the opaque securitization scheme has made them vulnerable. When insurance companies originate loans themselves, they can access the creditworthiness of the borrowers and have control over underwriting. Now, investors in MBS, ABS and especially CDO would have no idea about whether the borrowers could repay the loan or not. There is no gatekeeper guaranteeing the loan quality.

Lack of appropriate modeling capabilities and technology presents additional difficulties for investors. MBS with credit default is very complex to model accurately. CDO with multiple sector exposures is even more challenging. Theory and model development has to catch up with the trades happening in the marketplace. There is no recognized and tested model for valuing these securities and derivatives. Sell-side firms have invested a lot in this already. Unfortunately, buy-side firms are lagging far behind.

The market for MBS, ABS and CDO came to a standstill after the credit crunch. Valuing these in an illiquid market is very challenging. Interestingly, actuaries have been valuing illiquid insurance liabilities for decades. It is recognized that assumptions are very important in the valuation process. There are two natural sets of assumptions —a realistic set for pricing and a conservative set for valuation. This is because there is not a single set of assumptions that can be observed from the market. Solvency is the paramount concern of insurers. Conservatism is necessary to ensure solvency. Pricing and valuation functions are generally staffed separately to ensure that this is carried out.

The subprime crisis is only the tip of the iceberg. As home prices continue to sink lower, more homeowners are saddled with negative equity and are opting to walk away from their investments. The trend of increasing foreclosure rates has since spread to Alt-A and even prime loans. Credit card default is moving higher too. Consumers are overleveraged, and firms fare no better. The assets that firms thought they once had have either shrunk or are not there any more. There is not much left on the left-hand side of the balance sheet. The corporate default rate is getting higher. CDOs derived from MBS, ABS and corporate securities are losing values. Therefore, firms that sold credit default swaps (CDS) on MBS, ABS or corporates are losing money fast. This cross-product contagion makes it difficult to contain the crisis.

The future of the current originate-and-distribute model is still up in the air. It is clear that securitization has promoted liquidity and enhanced mortgage financing, so it is difficult to imagine getting out of securitization all together. There are proposals to shed more light on the opaque structures and make them more transparent. In any case, the lessons for investors are clear. There must be a gatekeeper to assure the quality of underlying loan portfolios and take responsibility of the underwriting in loan origination. Models, technologies and risk management tools must be strengthened. Investors will need to invest in the capability of analyzing structured financial securities. After all, there is no free lunch.

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