

The Evolution of Structured Credit and the Resulting Impact on Subprime: Remarks before *Risk* Magazine’s Mortgage Risk Conference, New York

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Michael Camdessus – Former governor of the French Central Bank and the director general of the IMF – was quoted in the FT recently as saying the present credit crisis was “avoidable.” In particular, Mr. Camdessus put, “the blame squarely on the lack of necessary rules and proper oversight from regulatory authorities that were taken by surprise...” the FT wrote.

Actions take so far to stem the crisis in the US have included: promoting dollar inflation; reducing the rate, increasing the maturity, and expanding the definition of eligible paper at the Fed’s discount window; a 50-bp Fed funds rate cut; and increasing agency subprime mortgage investment limits. In the UK, the deposit insurer has provided blanket coverage to depositors as they react to Britain’s own subprime problems.

None of these measures address the fundamental information problems that brought the current crisis. The present difficulties are instead grounded in basic financial information theory.

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I. INFORMATION THEORY

Information theory, the work of Nobel Laureate George Akerlof, has two simple foundations: (1) Information is costly, and, therefore, (2) Information is imperfect. Let me show how these two simple ideas can be used to derive implications for the present situation.

First, information is costly. Let's say I want to make a loan to you. You present your credit score, your pay stubs, tax returns, show me the house you want to buy, show me the title is clean, and the price. Does that answer ALL my questions? No. Is there a cost to me gathering additional information? Definitely. So the broker stops there rather than, say, hiring a private detective, and is ready to make the credit decision.

But we are not done yet. Realizing information is costly, and realizing that your application may be stretching the margins of acceptability, you show up to the broker's office dressed respectfully in a suit and tie and declare your undying devotion to repaying the loan. Does that help? A little. Maybe enough to boost you over the top? Perhaps.

What is going on here is that you are addressing the fact that information is costly by signaling. The broker is not asking directly for those signals and that is one reason why they are particularly valuable.

Hence, we have the first implications of costly information: information will be gathered up to a prohibitive marginal cost and therefore signals are useful.

Now, of course, the signals are not as valuable as the fundamental information the broker already gathered, but valuable nonetheless. It should be rather obvious that no matter how much signaling you do, the broker always discounts that signal. The broker is acting rationally, in that the broker is applying an adverse selection, or lemons, discount. Akerlof wrote his original work in the context of the market for used cars, so your signal, like the claim that the car has only "highway miles" or was "only driven by my grandmother" can be substantially discounted, just like the suit you wear to go see your mortgage broker.

Nonetheless, other signals the broker receives may be valuable. You chat and find out you went to high school together and have some mutual friends, which are positive signals (unless those friends are now derelicts), and so on, and so forth...

So there we have the basic tenets of information theory in simple understandable terms. The main point is that investors cannot afford to gather information beyond some marginal cost level, and will instead just impose a cost for the assumed degree of information difference in the form of a lemons, or adverse selection, discount.

How does information theory contribute to crises? The value of the lemons discount changes over time. If investors suddenly discover that borrowers were able to mask a new type of risk, they will price future transactions more dearly, either through spending more on information or just demanding more of a lemons discount. Either way, the price of credit rises.

What if only some, but not all, borrowers created the problem? Same thing. If lenders can't tell which borrowers are exposed to the increased risk, they may increase the price to all until they can sort out the problem.

If the risk rises too high and is too difficult to evaluate, investors may price future transactions at a prohibitive level, therein creating a liquidity crisis. If

investors seek to sell existing claims on the basis of the shock to information, we say there is a market crisis. When that takes place at banks (which are historically a home for low-information investments) we call it a bank run. Essentially, [click here for audio] we have a “failure to communicate.”

II. THE FUNDING PIPELINE

While investors and decision makers still do not know the value of the securities involved or where un- or mis-valued securities are held, they can still make inferences about market dynamics by understanding the relationships among what has happened so far. The diagram behind me outlines the basic line of financing for consumer mortgages. While the diagram specifically outlines the process for US non-agency (private subprime, alt-A, and jumbo mortgages), it generalizes to agency funding dynamics and international applications.

The diagram shows that mortgage loans are initially funded by warehouse lines of credit at the brokers for about 90 days, then held (briefly) on the lenders’ balance sheets before they are funded via asset-backed commercial paper conduits or structured investment vehicles (SIVs) during a seasoning period that may range from another 90 to 180 days.

After the loans are seasoned and show some degree of statistical predictability of performance, they can be sold to an unrelated entity (a brain-dead bankruptcy remote trust) and securitized, wherein they are funded by a structure of equity and risky and less risky debt with an average 5 year maturity. The less-risky securitization debt is typically rated investment grade and therefore relatively easy to sell.

The risky debt and equity of the initial securitization, however, is much more difficult to sell. The solution to the problem of selling the risky debt and equity in recent markets has been to re-securitize them. That has been accomplished in recent years using CDOs that, again, are funded by a structure of equity and risky and less risky debt with an average 10-20 year maturity, albeit with more risky debt and equity in the mix to reflect the increased overall risk of the underlying pool. Of course, that solution only perpetuates the problem, as the risky debt and equity of the CDO needs to be placed, subsequently. Hence, CDOs-squared and Hedge Funds have evolved to fill the market niche, funding the higher-risk portions of securitizations for 30-40 years or more.

The revelation is nothing new in the development of securitization. In fact, over the past 30 years of market development, placing the risky debt and equity created in the process of securitization has been the biggest challenge to the industry and has created many market difficulties. Securitization and re-securitization of the equity and risky debt worked as long as markets continued rising into 2007. Once markets fell and losses began to accrue, the strategy lost its allure.

Hence, the recent crisis arose out of loosened underwriting standards in an opaque market and was transmitted through the array of financial instruments used to fund the loans through securitization and re-securitization. Hence, we initially saw problems at the brokers and the erosion of warehouse lines of credit. Then, problems began to manifest in securitizations, hitting CDOs and hedge funds as investors there realized they held first-loss exposure to the difficulties in the securitizations. Once securitizations slowed, lenders had little choice but to

accumulate loan production in the commercial paper conduits and on-balance sheet, sources that already held high-risk late-2006 and 2007 vintage production. Hence, we now see rates rising as commercial paper conduits and SIVs become squeezed between funding capacity and the realization of the risk of the loans already funded by similar means.

III. LENDERS CANNOT DELAY THE INEVITABLE

Now we are witnessing lenders struggling to fund loan production by any means necessary while performance continues to deteriorate. Non-bank lenders like New Century already went by the wayside. Narrow bank lenders like Countrywide and WaMu do not have the money center capacity to further diversify their funding and are therefore currently under stress. Commercial banks like B of A are using any means necessary to draw funds, including bailing out their broker-dealers to keep the paper in investor hands. There will undoubtedly be more market histrionics to come as lenders continue to try to cover up their weaknesses. The problem, however, is the continued cover-up itself.

Note, however, that some subprime sectors outside mortgages are not currently sharing the difficulties. In particular, credit cards and automobiles have long lent to subprime consumers, but learned long ago to structure their securitizations in such a manner that does not create the funding risks now facing the mortgage industry.

First, both sectors securitize with far simpler structures than mortgages, using only a few tranches and virtually no sophisticated strips, PACs, and PIK-able instruments.

Second, both are very conservative in setting tranche cutoffs, although it has long been recognized that different quality issuers may have AAA tranche compositions that vary by as much as 10% or more.

Last, credit cards in particular fundamentally restructured their securitization vehicles to an issuance trust paradigm following the lessons learned in the 1998 Russian crisis. In doing so, they de-linked the risky and less-risky debt so that they could better assure continued market liquidity in the event of a temporary market disruption.

The lesson here is that subprime loans need simple transparent structures so that the idiosyncrasies arising from the riskier loans can be accounted for by investors. The sectors are still sensitive to fundamental decline, but transparent funding mechanisms have, so far, insulated the sectors from funding deficiencies that can cause disintermediation and the concomitant feedback that perpetuates cyclical economic declines.

IV. HOW MIGHT U.S. AUTHORITIES REACT?

Authorities rarely respond to crises in any meaningfully constructive way. I anticipate this crisis will be no different. One of the biggest risks, however, is that authorities impose significant restrictions on the markets and that those restrictions take generations to erode. Such a move would place a significant tax on the financial system and the economy for years to come.

In theory, existing regulation covers the problems, but U.S. authorities already have a track record of generally ignoring the structured finance sector.

While technically violating FAS140, during the early- and mid-1990s regulators routinely looked the other way while lenders provided recourse to their securitizations. In some cases, regulators did so explicitly for to provide forbearance, reasoning that the bank would be rendered critically undercapitalized if recourse was disallowed. Nonetheless, such actions provided little incentive for issuers to be more conservative about the legal and financial structures that defined risk in the arrangements.

Similarly, authorities consistently ignored repeated crises that arose from inadequate legal or financial structures. Funding crises arising in credit cards (1998), home equity lending (1999), and other receivables like aircraft leases and 403-b mutual fund fees (2001) were deemed too small to be of concern. The US Securities and Exchange Commission examined RMBS markets four times between 1998 and 2007, each time claiming no significant concerns with transparency. Authorities have therefore been consistently reluctant to examine market dynamics at incipient stages of development to infer larger-scale risks, which has turned out to have been a fatal oversight.

SEC Regulation AB and Sarbanes-Oxley both specifically address transparency in non-bank loan underwriting, servicing, and securitization. Unfortunately, neither has been effectively pursued in a manner that can provide adequate transparency.

The Securities and Exchange Commission Regulation AB was supposed to require collateral-level performance reports for RMBS, but allowed issuers to choose how to make those reports publicly available. As a result, most collateral reports are made to one company, FirstAmerican Loan Performance, who refuses to sell the data to academics or other researchers off Wall Street, even at the exorbitant price charged for the product.

Section 404 of the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley") requires the management of publicly-owned companies to assess the effectiveness of internal controls over financial reporting. Because of the increased focus on maintaining strong internal controls, Sarbanes-Oxley should have had a meaningful impact on servicing stability, both for publicly-owned servicers as well private servicers that voluntarily take similar steps.

In some cases, policymakers are advocating questionable and risky practices. It is interesting to note that policymakers have pointed to loan modifications as a means by which the industry can help consumers weather the current spate of resets and lessen the economic impact.

In doing so, however, policymakers, have overlooked the fact that one of the key problems that led to the current difficulties has been servicers' use of loan modification and re-aging policies to mask the true condition of subprime loans as they deteriorated. Servicers used aggressive loan modifications to avoid classifying loans in default status even though the payment plan typically resulted in lower periodic loan yield and modified loans typically post a 35% - 40% re-default rate and higher re-default loss rate than non-modified loans. When loans went in to default, servicers again used modification to restore payments in conjunction with aggressive (and, outside banks, largely unreported) re-aging policies to restore the loans from default to current status. Nonetheless, authorities are seeking to increase modification, with no accompanying reporting requirements to modification or re-aging, as a policy fix for subprime borrowers.

V. MARKET IS NOW “TOO-BIG-TO-FAIL”

Lack of attention from the authorities led the market to fund approximately 70% of consumer credit before authorities began to learn the mechanics of structured funding. Hence, authorities have a great deal of catching-up to do before any hope of imposing meaningful constructive guidelines.

Furthermore, securitization functions most economically on a large-scale basis, providing a means of rapid growth for securitizing firms. Hence, it is very difficult, if not impossible, for lenders to curtail issuance without facing severe financial distress or, most likely, failure. If outside factors, like restrictions on securitizations (imposed from authorities or the investing public) result in a market slowdown, many issuers are not likely to survive. Given that securitizing lenders cannot shrink without severe distress or failure, industry participants who have grown primarily on the basis of securitization are promoting themselves as effectively “too-big-to-fail.”

VII. CONCLUSIONS

We have seen both market crises and bank runs lately. Hence, my remarks on CNBC on August 21, that “to cut the Fed funds rate without a pre-condition of market transparency for structured finance is, at best, fundamentally reckless.”

Yet that is what happened, and more.

Actions taken so far to stem the crisis in the US have included: promoting dollar inflation; reducing the rate, increasing the maturity, and expanding the definition of eligible paper at the Fed’s discount window; a 50-bp Fed funds rate cut; and increasing agency subprime mortgage investment limits. In the UK, the deposit insurer has provided blanket coverage to depositors as they react to Britain’s own subprime problems.

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The administration’s move to increase Fannie and Freddie’s portfolio limits for subprime are an attempt to socialize risk by moving it to the government sector. If anyone doubts that Fannie and Freddie are already being used as a bailout mechanism, may I remind you that CIT sold its entire portfolio to Freddie the day the portfolio limits were raised. FHA lending will help borrowers cover their mistakes, but the affected borrowers are still not creditworthy. Hence, the government is assuming the primary credit risk arising from decreased lending standards over the past decade.

The GSEs and the FHA are both New Deal agencies seeking a revitalization. But Amity Schlaes, in her book “The Forgotten Man: A New History of the Great Depression,” details how New Deal policies actually hurt those who planned prudently, saving money for a rainy day and prudently weathering the effects of the Depression. The point is that social policy often dislocates incentives and sets the economy up for the next crisis: Securitization, developed to sell assets to end the thrift crisis, underwent unbridled growth to give us the present state of affairs.

But then, as now, New Deal institutions failed to bail out the economy because then, as now, the problem was information-based.

One of my earliest works showed that the largest bank panic in the nation, that in Chicago in July 1932, ended with the failure of fundamentally insolvent banks. Solvent banks certainly faced lines of depositors outside their doors, but were able to attract adequate liquidity to withstand the pressures.

The national bank holiday of March 1933 also marked the resolution of information-based financial difficulties. During the years prior to Roosevelt's election and inauguration, bank "holidays" routinely shut down local institutions to stem withdrawals. Some state banking systems had been on "holiday" in this way for years.

By March 3, 1933, Roosevelt's inauguration, all the banks in the US were closed on "holiday." On inauguration day, therefore, Roosevelt declared that all banks would be examined and only reopened if considered sound. Armies of bank examiners then set to work sorting out solvent and insolvent institutions, and by the end of the year about 1,000 (mostly small- and medium-sized) institutions were either shut permanently or needed further attention before reopening. Most importantly, however, there were no more bank runs or holidays.

The source of the Great Depression was an information problem that had tailed on for years. Although Hoover tried many of the same New Deal programs as Roosevelt adopted, they had no effect against markets that were demanding high (infinite) lemons premia. Resolution only occurred, therefore, when all banks were examined and certified.

The question, therefore, is how we reduce the lemons premium without significant delay – and economic difficulties that accompany that delay – and emergency action to regain credibility.