

# Remarks before the Bond Club of Philadelphia, September 20, 2007

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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 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.

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.

## **II. HOW DOES INFORMATION THEORY CONTRIBUTE TO CRISES?**

Now introduce some dynamics. 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 of 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.

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.

None of these measures address the fundamental information problems that brought the current crisis.

The present difficulties are grounded in basic financial information theory. What path does information theory provide to the future? (1) Socialized mortgage risk; (2) New Deal policies toward homeownership, and (3) a highly risky mark-to-market event in the future. There are opportunities, as well as threats in each.

### *1. Risk Socialization*

The administration's recent moves point toward increased socialization of risk, moving forward.

The Fed is attempting to rescue investors from themselves by fueling bailouts. The distinction between bailout liquidity and general liquidity lies in the Fed opening the discount window to specific forms of collateral that are held within a small community of investors. Such a targeted liquidity injection bails out only those investors who made poor market decisions to purchase and hold the affected assets.

If the Fed targeted liquidity more broadly, that would enable others to borrow to purchase the distressed assets at a discount, thereby fueling a fundamental reallocation of financial instruments to those best able to capitalize the investments and match their risk preference. Without such a reallocation, "unwitting" investors remain exposed to assets of greater risk than they originally intended and remain uncertain of the values of those assets, a fundamentally unstable combination.

The Fed's reduction of the target Fed funds rate fuels that ability to delay reallocation. But not in a healthy sense.

Think of selling an investment as a decision that includes an option of when to sell. This is an option without a maturity date, so you can just think of the types of variables that affect the early exercise of an American option.

Everything else held constant, a lower discount rate makes delay more affordable, and thereby increases the value of the waiting option. Expected

volatility, which is high just after a steep decline in asset values, also creates value to the option to delay.

Hence, lower discount rates led Japanese investors to delay divestment for more than ten years, a dynamic that is still playing out in the Japanese economy.

### *2. New Deal Policies, before the Depression*

The administration's move to increase Fannie and Freddie's portfolio limits for subprime are an attempt to move risk to the government sector. Fannie and Freddie are GSE's with effective full faith and credit (CIT sold entire port to Freddie today). FHA lending will help borrowers cover their mistakes, but the affected borrowers are not creditworthy. Hence, the government assumes 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.

Schlaes' is only one in a stream of new literature on the heterogeneity of effects of the Great Depression upon different people in different places in the Great Depression.

The point is, however, 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.

### *3. The Wrong Policies will again Induce Greater Crisis in the Future*

Previous 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 bank holiday resolved in 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.

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**III. THE CURRENT ADMINISTRATION IS GIVING THE GSEs AND FHA THE OPPORTUNITY TO CONTRIBUTE TO MORAL HAZARD INSTEAD OF LETTING MARKETS LEARN FOR THEMSELVES.**

Our understanding of the dynamic phenomena unfolding in the Great Depression – that the problem was information-based, rather than straightforward growth-based, and less direct policies were attempted before resolving the information problems – leads to profound conclusions for today’s markets.

Today the situation is similar. In fact, the same New Deal agencies are being promoted as a means to fix the problem. They didn’t work last time and they won’t this time.

Pressures have not gathered outside the asset-backed sector, where ABCP rates spiked in the last few weeks. Rather, the problem lies in the practices used in financial engineering, ascertaining whether that engineering can contribute to solid financial structures that have adequately reserved for the risks they were supposed to withstand. The downgrade scenarios, affecting a very high proportion of deals that have actually been reviewed, suggests all too often that answer is no.

This is where we come back to Camdessus’ remarks in the FT, saying the current crisis was “avoidable.” Recall, Mr. Camdessus, “puts the blame squarely on the lack of necessary rules and proper oversight from regulatory authorities that were taken by surprise....”

Why do I agree with those remarks? In particular, because regulators have had, for some time now, the ability to demand transparency and liquidity for structured finance investments, and have instead relaxed those regulations on behalf of Wall Street.

*A. How has the industry overlooked previous difficulties?*

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 the purpose of providing 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.

*B. What powers do the regulators have?*

SEC Regulation AB and Sarbanes-Oxley both specifically address transparency in non-bank loan underwriting, servicing, and securitization.

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Unfortunately, neither has been effectively pursued in a manner that can provide adequate transparency.

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.

Nonetheless, 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 (and largely unreported) 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.

The Securities and Exchange Commission introduced Regulation AB in 2004, which includes enhanced reporting requirements for RMBS issuers. 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.

### *C. 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 of failure, industry participants who have grown primarily on the basis of securitization are promoting themselves as effectively "too-big-to-fail."

## **IV. THE BIGGEST RISK**

I have opined previously that the biggest risk facing markets today is a Federal Reserve Fed funds target rate cut on September 18. The Fed funds rate cut will help preserve the status quo, leading markets, investors, and banks to the conclusion that no serious structural deficiencies require changes to current

practices. Josef Ackerman, CEO of Deutsche Bank, advocated that position when he called for greater transparency for investment banks and other involved in structured products. As Ackermann noted, fundamental changes are necessary to meaningfully alleviate the current crisis and lead to long-term funding stability for the consumer sector.

As pointed out previously, structured products now fund approximately 70% of consumer credit. Continuing to expand the role of structured products without addressing fundamental problems relating to reporting, structuring, and investor use of structured products will only set the stage for a much deeper crisis in the future.

## **V. LOOK FOR MARKET OPPORTUNITIES**

That said, prudent banks and nonbank lenders can insulate themselves from the crisis and its aftermath (whether a less risky or more risky environment) by taking Ackermann's advice. After all, firms do not need regulators to tell them what transparency and adequate reporting is – firms can provide that, themselves. Consistent underwriting and quality servicing have always been the core of sound bank strategy. Going forward, a focus on improving deal structures to better weather the effects of temporary liquidity crises along with conservative structuring (like credit card and auto trusts) will help banks not only weather the current crisis, but also help them build a stable basis of issuance into the future.

To be aware of the current crisis is to see not only the risks, but also the opportunities, that have been exposed. Even Moody's, under tremendous pressure as a result of the crisis, is taking advantage of the situation to expand its product offerings and improve its business enterprise with the announcement of two new initiatives next year to help investors better understand debt markets. Moody's plans to introduce tools that will help investors put a price on various forms of debt, even as American and European regulators examine the role credit ratings agencies played in the sub-prime mortgage meltdown and resulting credit crunch.

While investors may still wish to avoid investing on the basis of those ratings (or may just assign them a steep lemons premium), this is just one example of the changes taking place in the new marketplace for risk. More will be sure to follow.