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The Sub-prime Problem: Causes and Lessons

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by Mark Adelson and David Jacob

Summary

Today's sub-prime mortgage situation has its roots in the failure of market-based restraints on the riskiness of loans that lenders could make. Before securitization, sub-prime mortgage lenders retained the loans that they originated and, therefore cared deeply about credit quality. Following the rise of securitization, bond insurers constrained subprime lenders from making unreasonably risky loans. The bond insurers did so through their pricing decisions and through limits on their appetite for risk. Later, sophisticated investors from the mainstream MBS area started taking credit exposure to sub-prime mortgage ABS by purchasing subordinate tranches from uninsured deals. Like the bond insurers, they were experts in mortgage credit risk and that expertise was reflected in their risk appetite and pricing behavior.

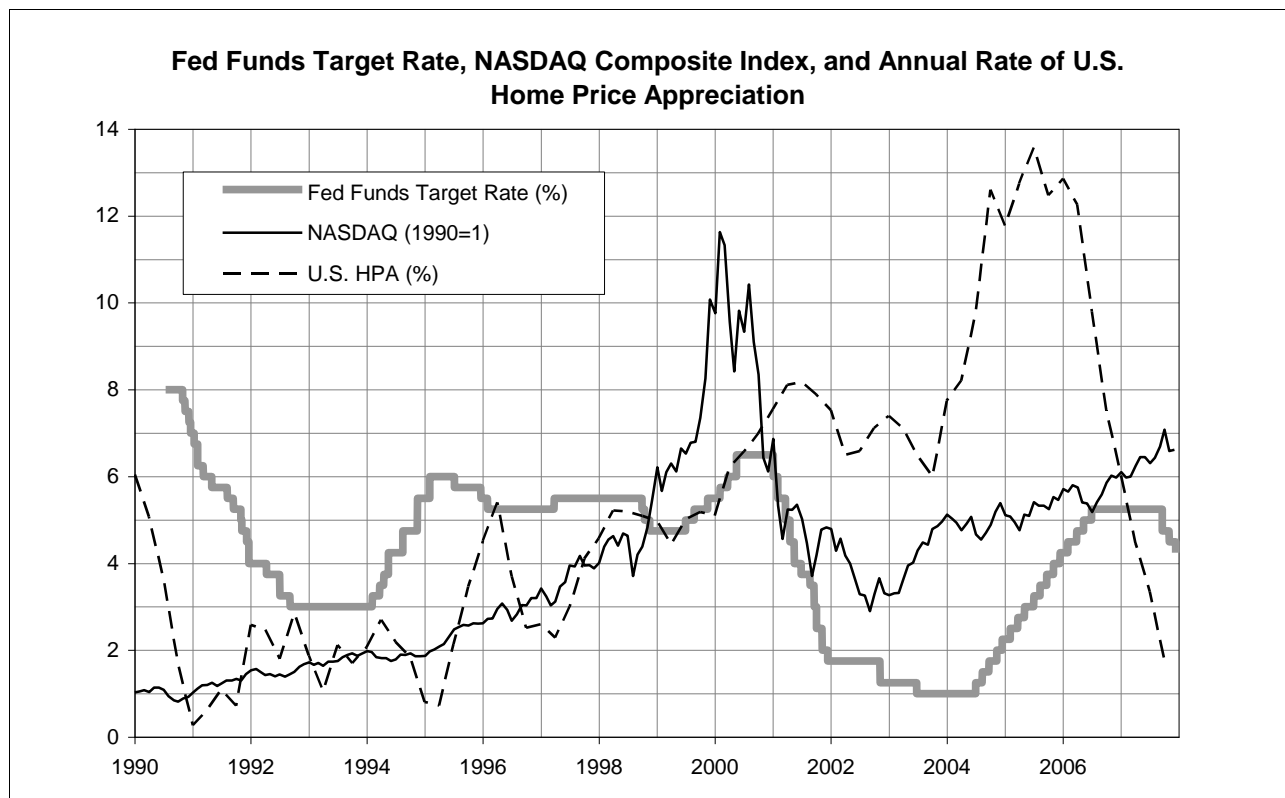
However, starting in 2004, CDOs and CDO investors became the dominant class of agents pricing credit risk on sub-prime mortgage loans. Their assessments of risk were based on a different approach than those of the bond insurers and traditional investors whom they replaced. The CDOs essentially drove the bond insurers and the traditional subordinate investors out of the market. The departure of the bond insurers and the traditional subordinate investors left a void, because the CDOs were less discriminating and selective in allowing high risk loans to be included in securitizations. In the absence of restraints, lenders started originating unreasonably risky loans in late 2005 and continued to do so into 2007.

High levels of defaults and foreclosures have an impact far beyond the borrowers and their families. Communities and neighborhoods suffer dislocations, and the magnitude can be great enough to become a political issue. Market-based restraints on the lending practices are not sufficient to prevent a repeat of the current episode. Accordingly, policy action to provide an

alternative framework of restraints through legislation or regulation is an appropriate measure to prevent a repeat of the sub-prime problem.

Discussion

Origins of the Sub-prime Problem: Like the fall of Rome and the sinking of the *Titanic*, there are many causes of the sub-prime problem. For example, the sub-prime problem could not have happened without the housing bubble, which, in turn, could not have happened without the Federal Reserve's accommodative interest rate policy of the early 2000s. That, in turn, would not have occurred without the tech bubble of 1998-2000, which could not have occurred without growth of the Internet. By that chain of reasoning, one might conclude that the Internet is the cause of the sub-prime problem.

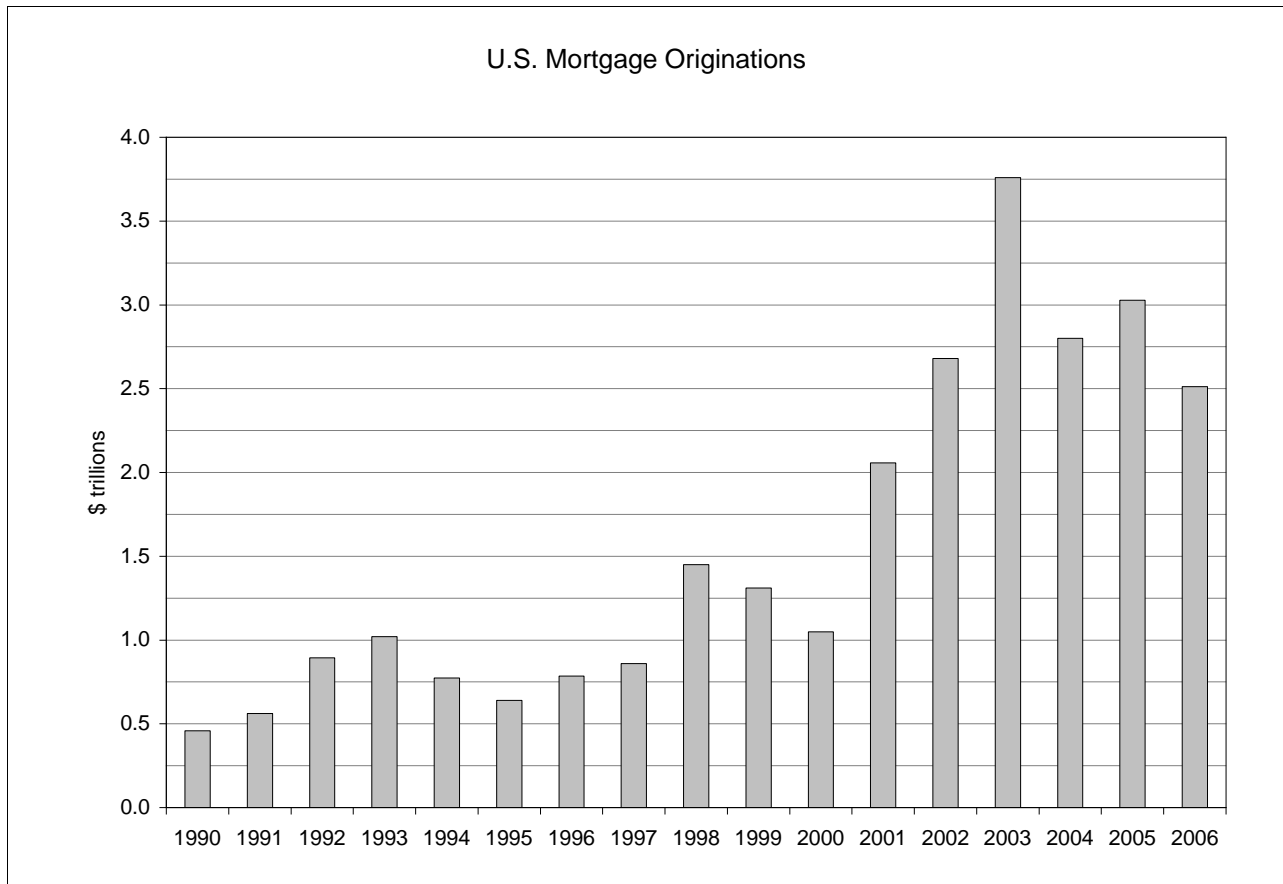


Sources: Federal Reserve, Yahoo.com

However, enumerating all the remote or contributory causes of the sub-prime problem is not a very meaningful exercise. Instead, it is more valuable to seek out and identify the proximate cause. Obviously, the proximate cause cannot provide a full explanation of the sub-prime problem all by itself. What it can do, however, is reveal the critical points where changes on the mortgage finance landscape made the sub-prime problem inevitable.

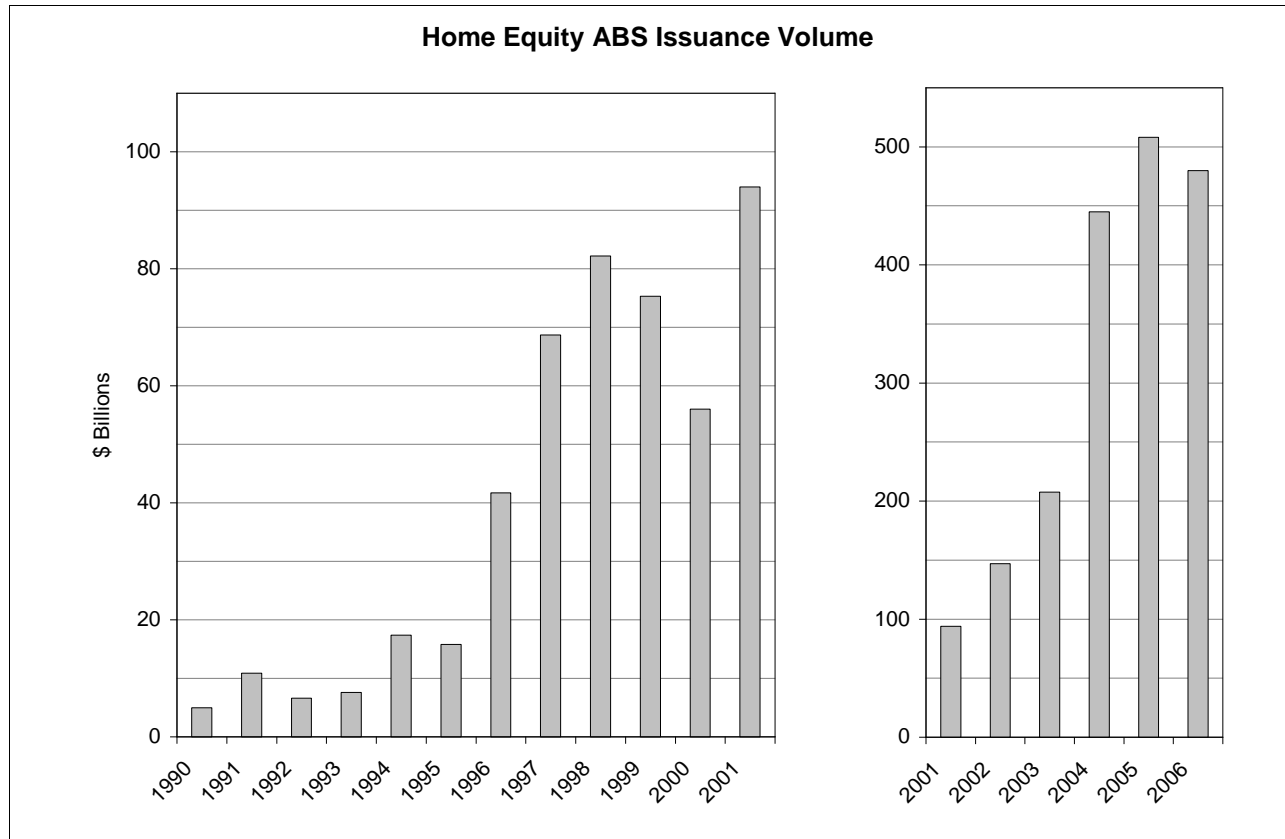
Following the 1991 recession, U.S. mortgage originations grew rapidly over the next two years, peaking at more than \$1 trillion in 1993. Then, as origination volumes dropped in 1994 and 1995, several mainstream mortgage lenders entered the sub-prime market in an effort to

sustain their origination levels. Those lenders had often used securitization as an outlet for their mainstream mortgage production and they successfully extended its application to their new activities in the sub-prime sector. Previously, the "home equity" securitization sector had existed, but it had been much smaller and had contained a larger proportion of second lien loans and lines of credit. The actions of the well-established, mainstream lenders attracted new entrants to the sub-prime sector, most of whom relied solely or primarily on securitization for funding their production. The volume of securitization in the "home equity" sector started to climb rapidly.



Source: Inside Mortgage Finance

Until 1997, the vast majority of home equity ABS had used bond insurance for credit enhancement. Thus, the bond insurers were the main group of market participants pricing the credit risk on deals backed by sub-prime mortgages. A bond insurer would set its premium (fee) for a given deal based on its analysis of the underlying loans and on the seller/servicer's track record. Moreover, a bond insurer would not accept unreasonably risky loans for inclusion in deals that insured. The bond insurers' willingness to say "no" was a key constraint on the riskiness of loans that originators could make.

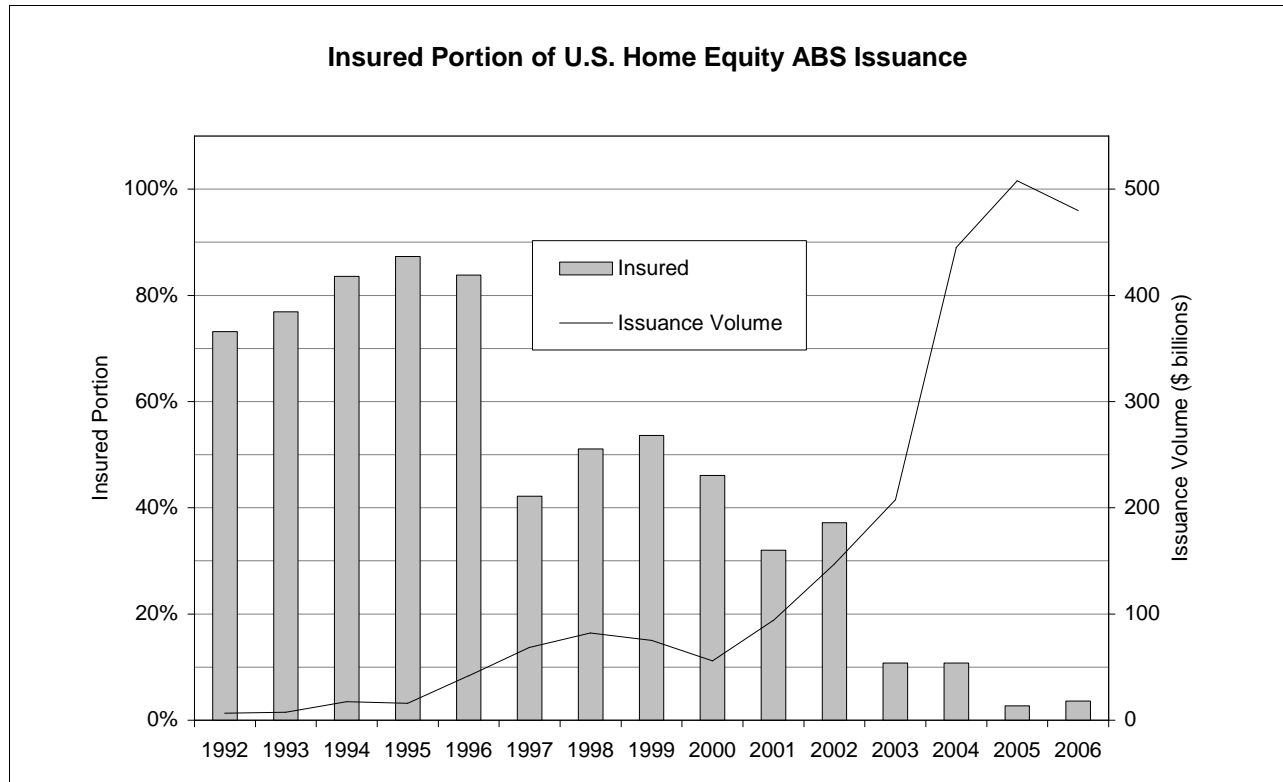


Sources: Moody's, Bloomberg, Asset Securitization Report

Around the middle of 1997, issuers of sub-prime mortgage ABS started using subordination as the method of credit enhancement in a growing proportion of their deals. The investors who purchased the subordinate tranches of those deals were generally ones that had significant mortgage expertise and extensive experience investing in the subordinate tranches of deals backed by mainstream mortgage loans. Like the bond insurers, the traditional subordinate investors were methodical in their pricing of risk and were willing to say "no" to loans that carried too much risk.

The subordinate investors became a source of competition for the bond insurers in the sub-prime mortgage area. Rather quickly, the market established an equilibrium, where bond insurance provided credit enhancement on about half (40%-55%) of the new deals and subordination provided credit enhancement on the remainder. That balance persisted from 1997 through 2002.

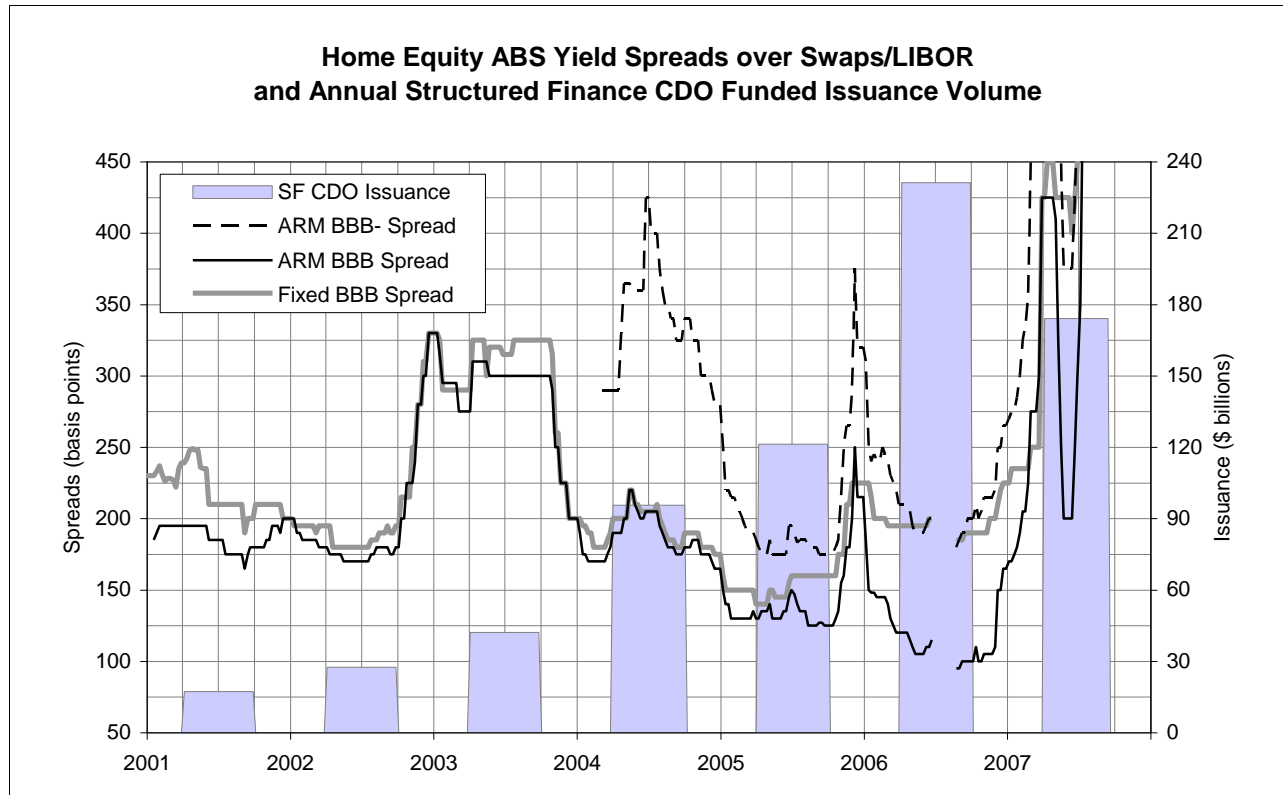
The bond insurers and the subordinate investors provided a critical benefit to the whole system. As the key players who accepted and priced credit risk on sub-prime mortgage loans, they provided a market-based limitation on the riskiness of loans that sub-prime lenders could securitize. Moreover, because both the bond insurers and the subordinate investors had substantial experience and deep expertise in the area of mortgage risk, their pricing decisions and their risk tolerances were sensible.



Sources: Asset-Backed Alert Database (insured portion), Moody's, Bloomberg, Asset Securitization Report

From around the start 2001, spreads on the triple-B-rated tranches of top-tier home equity ABS were in the range of 200 to 250 basis points over swaps or LIBOR. Triple-B-rated tranches from weaker issuers commanded only slightly wider spreads. After gradually tightening for more than a year and half, spreads widened sharply in late 2002, largely due to developing problems in the manufactured housing sector and continuing challenges in the franchise loan and aircraft ABS sectors. Spreads on triple-B-rated home equity ABS tranches remained stable through most of 2003, before tightening in the final quarter of the year to their 2002 levels. Thus, entering 2004, spreads on triple-B-rated home equity ABS were roughly at the same levels at which they had been in 2001.

Things started to change in important ways in 2004. Structured finance assets – particularly home equity ABS – became the main asset class backing collateralized debt obligations. For the full year, structured finance assets accounted for half of the assets backing arbitrage CDOs. In fact, the market started creating "synthetic ABS" (*i.e.*, credit default swaps on ABS) to meet the strong demand from the CDO sector. The surging demand from the CDO sector helped spreads on triple-B-rated home equity ABS to tighten notably during the second half of 2004. By the end of that year, spreads on triple-B-rated home equity ABS had reached their tightest levels since 1998.



Sources: JPMorgan

The trend continued into 2005. CDOs had a growing – and seemingly insatiable – appetite for home equity ABS. ISDA's introduction of standardized forms for creating CDS on ABS accelerated the trend. Spreads on triple-B-rated home equity ABS became so tight that the bond insurers and the traditional investors stepped to the sidelines, leaving the CDOs as the sole investors for subordinate credit risk in sub-prime mortgage ABS. **This was the key event that changed everything.**

The CDOs were less selective and discriminating than the bond insurers and the traditional investors had been. In particular, the CDOs were willing to accept loans in securitizations that the bond insurers and the traditional investors would have rejected. Thus, when the bond insurers and the traditional investors left the market, the benefit that they had provided – a limit on the riskiness of loans that originators could securitize – disappeared. In effect, there was no constraint on the riskiness of sub-prime loans that could be included in securitizations. With no constraints, lenders began originating riskier loans. In fact, there is a clearly discernable trend of deteriorating sub-prime loan quality that starts in late 2005 and runs into 2007.¹

Why were CDOs willing to accept ABS backed by unreasonably risky mortgage loans? Perhaps it was because the managers of the CDOs lacked the knowledge and experience of the bond insurers and the traditional investors. More likely, however, it was because the CDO

¹ Adelson, M., and Jacob, D., *ABS/MBS Litigation Outlook* (19 Nov. 2007), http://www.adelsonandjacob.com/pubs/Litigation_Outlook.pdf.

managers did not care. The CDO managers did not bear the primary risk of their investment decisions. Rather, the investors in the CDOs were the ones who bore the risk. The CDO investors generally were not mortgage experts, but rather relied on modeling assumptions and Monte Carlo simulations as the main basis for judging the credit risk of their investments. Some CDO investors may not have fully understood the math and the assumptions behind the analysis. Some may have pretended to understand it in order to avoid appearing ignorant or unskilled in math. Some probably understood it and (naïvely) accepted it. In doing so, they ascribed mathematical properties to the underlying sub-prime mortgage ABS – default probabilities, recovery rates, and correlations – when they should have been focusing on the actual loans and on the lending process.

Somewhat ironically, the several of the bond insurers ended up with significant exposure to the sub-prime problem through their CDO departments. They took exposure to the senior or "super senior" tranches of CDOs that invested in the ill-fated ABS deals of 2005 and 2006. The CDO departments within the bond insurers seem not to have bothered calling on the expertise of their colleagues in the mortgage departments of those companies. However, in fairness to the bond insurers, many other firms (including some of the largest investment banks) fell victim to the sub-prime problem through their CDO departments.

Lessons: Still, delinquencies and foreclosures might never have risen to troubling levels had policymakers instituted rational constraints for the sub-prime mortgage sector. Before the bursting of the real estate bubble, government mortgage policy focused only on predatory lending activities involving wrongful conduct by lenders or mortgage brokers. Apart from the issue of predatory lending, policymakers seemed to view substantive regulation of mortgage lending as anathema to the national goal of promoting home ownership.

Experience has now shown that borrowers can hurt not only themselves, but also their neighborhoods and communities, by making unwise choices in financing their homes. New legislative and regulatory proposals might establish entirely new requirements, and a new level of consumer protection, in the area of mortgage finance.

At first blush, restraining lenders from extending loans that borrowers might not be able to afford seems like an unnecessary governmental intrusion on individual liberty. Many would argue that borrowers ought to determine for themselves what loans they can afford, and that the government should not meddle in those determinations. However, the current situation amply demonstrates that borrowers cannot be counted on to make wise choices and the consequences of poor choices can be far ranging when foreclosures are the ultimate result. Therefore, substantive regulation of the lending process can be viewed in the same light as mandatory safety standards for products. For example, the government mandates the installation of seat belts in all cars, and restricts the distribution of unproven drugs, regardless of whether consumers want them or not.

Several current policy proposals would require lenders to evaluate a borrower's ability to repay before extending a loan. We think this is good idea. However, the proposals do not address the issue of excess leverage on certain home loans. We believe that there is room for policy action in this area as well. Until recently, most low- and no-equity mortgage lending was concentrated in the area of FHA-insured loans on modest homes. Based on the recent problems with low- and no-equity loans, policymakers should consider prohibiting loans with cumulative

loan-to-value ratios higher than 90%, except for FHA-insured loans. In addition, policymakers should consider limiting loans with cumulative LTVs higher than 80%.

Conclusion: The failure of market-based restraints on lenders' behavior was not inevitable. Had there never been a housing bubble or if it had not burst, borrowers might never have gotten into trouble. More pointedly, had the pricing of risk remained in the hands of experienced and knowledgeable players, lenders could have been restrained from making unreasonably risk loans.

All things being equal, the less the government meddles in the lives of individuals the better. However, when market forces fail to produce acceptable results, government intervention may be necessary and appropriate. The general trend of financial disintermediation and the evolution of the U.S. capital markets weakened market discipline in the mortgage sector to the point where it created social disruptions and political fallout. In such a case, policy action to correct the deficiency is a reasonable solution.

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