



Covered Bonds: A New Way to Fund Residential Mortgages

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Like the now government-owned Fannie Mae and Freddie Mac, large investment banks helped create funds to finance new mortgages by issuing securities backed by pools of existing mortgages. But private firms have abandoned these instruments, and with them a large source of mortgage funds has disappeared. Four large investment banks plan to create a new U.S. market for an old instrument, hoping to bring liquidity back to the mortgage market.

Until the summer of 2007, mortgage lenders increasingly tapped capital markets for quick and cheap funding. Through a process called securitization, they could sell the loans they had originated to the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, or to large investment banks, which then packaged these loans into various securities and sold them to investors. Lenders used the sale proceeds to make new loans, which were also sent through the same securitization process.

Since the credit market turmoil started, however, this source of funding is less convenient and abundant than it used to be. While lenders can still sell prime mortgages smaller than around \$417,000 to Fannie and Freddie (the exact limit depends on the region), one segment of the securitization market has essentially disappeared: Large investment banks have stopped issuing their mortgage-backed securities and are no longer buying mortgages to repackage for that purpose. This source of funding until recently constituted a trillion dollars (see figure 1) and was used primarily by lenders that made subprime loans and loans larger than \$417,000. Its disappearance has the potential to further disrupt credit flows and damage the ailing housing sector.

Despite this setback in the mortgage-backed securitization market, new funding sources are emerging. In July of this year, four large investment banks—Bank of America, Citigroup, JPMorgan Chase, and Wells Fargo—unveiled their plan to kick start a covered-bond market for residential mortgage lenders. Whether such a market is the solution to mortgage lenders' funding needs remains to be seen. But covered bonds do have one feature that should make them an

improvement over the mortgage-backed securities previously issued by private institutions. Securitized mortgages were not backed by the capital of the loans' originators against losses, but covered bonds are.

Securitization: What Went Wrong

When a bank makes a mortgage loan and keeps it on its balance sheet, regulators require the bank to finance at least four cents of every dollar of that loan with the bank's own capital. This requirement ensures that the institution maintains a cushion against unexpected losses, protecting the bank, its customers, and the agency that insures the bank's deposits. On the other hand, when a bank securitizes a loan, it is permitted to remove the loan from its balance sheet, eliminating the cushion requirement and freeing the bank to use the capital for other purposes. Recent experience has shown that while loans may have been removed from the balance sheet through the securitization process, all the associated risks were not. We have learned that, in essence, the process moved loans from a heavily regulated, well-monitored, and generally understood arena into one where risks were difficult to trace or quantify.

The underlying risks behind most securitized mortgages are obscured by their complexity and the number of parties involved in their packaging. The securitization process begins with the underwriter (an investment bank, Freddie, or Fannie), who purchases mortgages from various lenders and then transfers ownership to a special-purpose entity (a separate corporation or business trust). The special-purpose entity creates securities that represent claims on the interest and principal payments of the pooled mortgages.

Rating agencies then judge the level of risk in the pool and suggest credit enhancements that will elevate the securities' ratings to some desired level. Any number of enhancements might be added that involve other parties. For example, insurance against mortgage defaults might be purchased from a third party and added to a set of securities.

At this point the securities were sold to investors, and often, they underwent further securitization. A number of mortgage-backed security issues could be purchased by another party, thrown into a new asset pool, and used to back the issue of new securities, called collateralized debt obligations. Those securities in turn could be put into structured investment vehicles—another type of investment pool—and another set of securities could be issued against that pool's assets.

Securities issued at each stage have different characteristics, and these attracted investors with different goals and risk tolerances, so all this securitization and re-securitization happened for a reason (I reviewed some of these reasons in "Securitization," Federal Reserve Bank of Cleveland *Economic Commentary*, August 15, 2003). The initial consequences of the securitization boom looked great: It increased the amount of low-cost funds available to lenders (and it gave them a way to generate fee income for originating loans without putting their own capital at risk), it increased borrowers' access to low-cost loans, and it gave investors an alternative means of generating cash flow. But features unique to these securities set the stage for the crisis we are dealing with now.

The complex structure of mortgage-backed securities creates a big problem for investors. Because the mortgage loans that back a security can be lost under layers of securitization deals,

determining anything about those loans or who is really bearing the default risk is practically impossible. In such a situation, investors cannot be sure that lenders have done their due diligence or even that they are not dumping poor-quality, improperly originated loans into the securitization pools.

Without that kind of information, investors typically would not buy, but in the case of mortgage-backed securities, investors relied on alternative mechanisms that they assumed were sufficient to ensure that lenders had done the right thing. These included the opinions of credit-rating agencies, the presence of credit enhancements, and the contractual arrangements between the underwriter and the lenders. Those contractual agreements, for example, include a recourse clause (in the representations and warranties) that obligates lenders to buy back loans that are later discovered not to have been originated with proper due diligence. Furthermore, reputation often functions to regulate behavior in credit markets, and investors may have expected this mechanism to drive lenders that had sold low-quality loans out of the market.

As the housing market declined, the weaknesses of the arrangement became obvious. It turns out that credit-rating agencies failed to properly estimate the risks involved in the residential real estate business. Mortgage insurers lacked sufficient cushion to absorb losses and back their promises when the losses grew large. Representations and warranties were not as effective as investors had anticipated. While some large banks and investment banks had the capital to bring poorly performing loans back onto their balance sheets and recognize the losses, some mortgage lenders were so thinly capitalized that they did not have the capacity to absorb the growing losses; they simply went out of business and left investors holding the nonperforming loans.

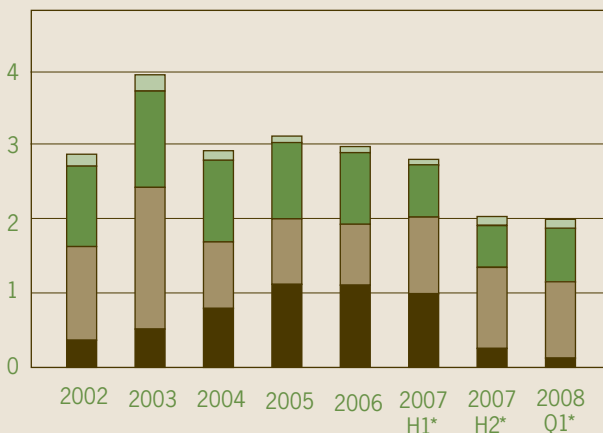
In hindsight, the lack of capital significantly weakened our mortgage financing system not just by curtailing its ability to survive large losses but also by impairing its motivation to do the necessary due diligence at the time of origination. The latter issue is known as moral hazard in economics: When the lender has less of its own skin in the game, it may have a reduced incentive to screen applicants before approving them for a loan. The lender earns fee income as soon as the loan is approved, but if the loan defaults later on, it is the investors who lose, not the lender.

Recourse clauses might check lenders' behavior, but in a booming real estate market with declining interest rates, lenders would not normally expect massive loan returns since borrowers who cannot afford their mortgage often refinance before they become delinquent. The insurance companies that guaranteed these pools of loans and the investors who purchased them must have been similarly blindsided by the decades-long appreciation in real estate markets. If the risks were underestimated, it is no surprise that capital cushions were not built up anywhere in the financial system in preparation for a downturn.

1. Mortgage Originations by Source of Funding

■ Federal Housing Administration lending
 ■ Balance-sheet lending
 ■ GSE mortgage-backed securities
 ■ Private securitizations

Trillions of dollars



*Annual rates.

Source: Inside Mortgage Finance.

Covered Bonds

Covered bonds are bonds issued by banks and collateralized by a dedicated pool of mortgages, known as the cover pool. Unlike securitized mortgages that are removed from the bank's balance sheet, the mortgages in the cover pool remain on the balance sheet, and the bank must hold capital against potential losses just like any other mortgage. Like securitization, the issuance of covered bonds converts illiquid mortgages into a funding source for the bank.

Covered bonds have been around for more than 200 years in Europe, but they have yet to catch on in the United States. One of many reasons why securitization may have become so popular instead in this country is because it enabled banks to remove loans from their balance sheets and to free up capital they would have had to hold in reserve. U.S. investors may also have preferred securitized assets because they provided a low-cost way of gaining some exposure to the real estate market at a time when risks seemed low and returns above average.

By contrast, covered bonds do not offer investors any exposure to the residential mortgage market even though they are backed by residential mortgages. There is no exposure because the interest and principal payments are the bank's obligation—they do not depend on the cash flow from mortgages in the pool. If a mortgage defaults or is prepaid, the bank has to replenish the cover pool with other mortgages on its balance sheet. If the bank becomes insolvent, the loans in the pool are separated from other assets and are used solely to repay the bank's obligation to covered bondholders. It is also possible for the bank to enter into contractual arrangements with financially sound third parties to continue making the principal and interest payments on the bonds if the bank becomes insolvent. In other words, a covered bond is a secured debt obligation of the bank, for which the mortgages serve as collateral but have little impact on the cash flow of the bond. Despite their low-risk features, covered bonds could not compete in the past for investors' attention against the seemingly high, risk-adjusted returns of the mortgage-backed securities.

One other important barrier to the development of a covered bond market in the United States was the regulatory uncertainty surrounding the enforceability of the senior claim of the covered bondholders on the cover pool. Technically, depositors are the most senior claim holders of a bank. After the Federal Deposit Insurance Corporation (FDIC) seizes a failed institution and takes over its deposits, the bank's assets are used to pay off the depositors before the bondholders. Covered bonds require a change in the seniority structure. The cover pool must be outside the reach of the FDIC and the insured depositors. Until recently, it was not clear whether the FDIC would recognize the covered bondholders' secured interest over the cover pool. With the collateral in doubt, it is perhaps not surprising that the market never really took off.

In July 2008, the FDIC cleared the uncertainty ("Covered

Bond Policy Statement: Final Statement of Policy"). If the cover pool meets certain conditions, it will remain outside the reach of the FDIC. Namely, the bonds must be secured primarily by a geographically diversified pool of performing, first-lien, one-to-four family residential mortgages with loan-to-value ratios not exceeding 80 percent, underwritten at the fully indexed rate, and relying on documented income. Some fancy concoctions of recent years, such as negative amortization mortgages, are not eligible. The FDIC also put some rules in place to protect its interests (and the taxpayers') should an institution fail. When the FDIC takes over an institution, it should not be the case that all the high-quality assets are promised to covered bondholders, with only the poorest-quality assets left to pay off the depositors. To prevent such an occurrence, the share of covered bonds in the institution's total liabilities cannot exceed 4 percent if they are to remain outside the reach of the FDIC.

In addition to the FDIC's conditions, the Treasury Department came up with its own suggestions, mainly to increase the transparency of the covered pools ("Best Practices for Residential Covered Bonds," July 2008). Investors will receive monthly updates on the changes in the make-up and performance of the pool. The issuer will also test the pool for its performance under different shock scenarios, and the results of the test will be available to investors. Having more information about the condition of the pool will go a long way toward ensuring that investors do not pull out of the market en masse in a future crisis because they can't value the collateral.

Do We Need a Covered Bond Market?

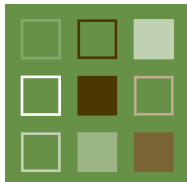
Covered bonds address a major weakness of the securitization market: lack of capital to absorb losses. Investors now realize that mortgage originators' promise to do the necessary due diligence depends on them putting their own money behind that promise. In the past, that money was close to nil. With covered bonds, a fixed percentage of capital will now be held in reserve by the lender for each loan because the loans are kept on the balance sheet.

The securitized loan market will also revamp itself to address its weaknesses. For example, investors are unlikely to sign up for securitization deals in which the sellers of loans do not stand to lose money if the loans turn sour. With or without the introduction of covered bonds, the build-up of capital across the financial system to back mortgage assets may bring some confidence back to the securitization market.

In the very short term, however, the challenge is to restore the flow of credit to the real estate market. One way to convince banks to lend more is to make the originating and carrying of mortgages more attractive than they currently are. Securitization accomplished this goal by removing the loans from the balance sheet and erasing their capital charge. We can say with a reasonable degree of certainty that the securitization market is not going to make a comeback until the capital and transparency problems we have identified are ironed out.

In the meantime, covered bonds increase the attractiveness of mortgage lending by converting illiquid mortgages into collateral against which the bank can borrow. These bonds are also attractive to investors because even though their liquidity may be low early on in a brand-new market, they are eligible as collateral at the Federal Reserve's borrowing facilities as long as they are highly rated by rating companies.

Whether the increased transparency and improved capital cushions will be enough to calm down jittery investors and whether the covered bond market will be up and running in time to revive the ailing housing market still remain to be seen.



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