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What are covered bonds?

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This article explains covered bonds and their usefulness as an alternative to mortgage-backed securities for home financing. The use of covered bonds may increase banks' willingness to issue mortgages, but it can also affect the risk exposure of the deposit insurance fund.

Covered bonds are debt instruments issued by banks and collateralized by specific pools of assets, usually home mortgages.

Covered bonds are debt instruments issued by banks and collateralized by specific pools of assets (home mortgages or, in the U.S., AAA-rated mortgage-backed securities, or MBSs). Much of the recent interest in covered bonds has arisen because some believe that they may be a new source of mortgage financing, providing banks with an alternative to the securitization of mortgages.[1] If the bank issuing covered bonds should default, the holders of covered bonds have a priority claim against the collateral assets. This effectively puts them in line ahead of other creditors, including the Federal Deposit Insurance Corporation (FDIC), when the issuing bank reneges on its obligations. So, the use of covered bonds may increase the willingness of banks to issue more mortgages, but it can affect the risk exposure of the deposit insurance fund. In this *Chicago Fed Letter*, I explore covered bonds' usefulness as an alternative to mortgage-backed securities for home financing, and illustrate how they may affect the risks to the FDIC.

Covered bond structure

Covered bonds have been around for years. They were first used in eighteenth-century Prussia to finance public works projects. Over time, as they were introduced gradually in many European countries, they spread to other uses, notably financing home mortgages. Today, banks in 22 countries in the European Union issue them. According to the European Covered Bond Council, at the end of 2007 over 2 trillion euro of covered bonds were outstanding in Europe, with over half of them backed by home mortgages. Two banking organizations based in the United States (Bank of America and Washington Mutual) issued them prior to 2008, but other banks may join them soon (see note 1).

In its basic form, a covered bond is a debt instrument that pays a fixed interest rate (the coupon payment), with principal repaid at maturity.[2] A key feature of these bonds is that the payments are collateralized by a pool of specific assets. The bondholders have the first claim on these assets if the issuing bank defaults. A covered bond issued by a U.S. bank needs to meet certain requirements for the FDIC to automatically allow the creditors access to the collateral when a bank fails and is taken over by the FDIC.[3] Key features include that the collateral must consist primarily of home mortgages (with up to 10% of assets permitted to be AAA-rated mortgage-backed securities) and that the bonds can total no more than 4% of the bank's total liabilities.[4] Because of the FDIC policy, in the remainder of this article, I focus solely on covered bonds that have home mortgages as collateral.

The pool of collateral backing a covered bond is required to be at least equal in

1. Sample bank portfolios

Assets	Liabilities and equity
A. Initial portfolio	
$200 mortgages	$570 insured deposits
$400 other assets	
	$30 equity
$600	$600
B. Portfolio with covered bonds	
$200 mortgages	$370 insured deposits
$400 other assets	$200 covered bonds
	$30 equity
$600	$600

NOTES: This figure is the balance sheet of a bank that wants to finance $200 in home mortgages and $400 in other assets while retaining a 5% capital-to-assets ratio. See the text for further details.

2. Effect of default on federal deposit insurance

Insured deposits	Uninsured deposits	Covered bonds	Asset value in default	Losses to federal deposit insurance
First example				
$570	$0	$0	$500	$70
$370	$0	$200	$500	$70
Second example				
$300	$270	$0	$500	$36.84
$300	$70	$200	$500	$56.76
Third example				
$370	$0	$300	$550	$120

NOTE: See the text for further details.

value to the principal outstanding of the issued bonds. In almost all cases, the value of the collateral exceeds the bond principal (known as overcollateralization).[5] When the mortgages in a pool are repaid or decline in quality, the issuing bank is required to add new assets to the pool to return the value to at least its required level. If the issuing bank defaults, the pool is used to pay investors, and if the pool is insufficient, the investors become general claimants against the issuing bank for the difference. Note that overcollateralization and the requirement that the pool of assets be replenished mean that it is very unlikely that a pool would not be sufficiently funded to pay investors.[6]

Covered bonds vs. mortgage-backed securities

The recent interest in covered bonds has arisen because they potentially offer banks a different way to finance home mortgage loans beyond the originate-to-distribute (OTD) model that many banks had adopted. The problems with subprime mortgage loans in 2007 produced losses on the mortgage-backed securities. This made it more difficult to sell MBSs, leading banks to rely less on the OTD model and reducing overall mortgage lending.[7] For banks to be able to continue to make mortgages at the same rate as before, they would have to find a new way to fund the mortgages. Enter covered bonds. According to Treasury Secretary Henry M. Paulson, Jr., "As we are all aware, the availability of affordable mortgage financing is essential to turning the corner on the current housing correction. And so we have been looking broadly for ways to increase the availability and lower the cost of mortgage financing to accelerate the return of normal home buying and refinancing activity. We are at the early stages of what should be a promising path, where the nascent U.S. covered bond market can grow and provide a new source of mortgage financing."[8] Covered bonds offer an alternative to securitization as a means to finance mortgages.

A brief explanation of mortgage-backed securities may make the contrast with covered bonds easier to understand.[9] An MBS is a bond backed by a fixed pool of mortgage assets. To issue an MBS, a bank or other financial intermediary sells the pool of assets to what is known as a special-purpose vehicle (SPV). The SPV is a legally separate entity. This serves the purpose of removing the assets from the bank's balance sheet and gives holders of the bonds a clean legal claim on the assets in the SPV, much as holders of covered bonds have a claim on the collateral pool. Interest and principal payments on the MBS come from the interest and principal payments on the mortgages in the pool. Funds from the mortgages pass through the SPV to investors. The MBS pools typically have overcollateralization and other protections against insufficient funds to pay investors. However, if there are not sufficient funds in the SPV, the MBS holders have no claim against the bank that sold the mortgages to the SPV (except in special circumstances, such as when there is fraud).

Who benefits from covered bonds?

Given all this, is allowing banks to segregate some assets a good idea? I present several examples showing that this answer might depend on which liabilities covered bonds replace and whether allowing covered bonds leads banks to increase mortgage lending.

If covered bonds replace insured deposits and do not result in increased lending, then the ability to issue bonds will have little effect on the risk to the federal deposit insurance fund and the amount of equity that banks require. To see this, I present a simple example, but the results are more general.[10] Consider a bank that wants to finance $200 in home mortgages and $400 in other assets, using insured deposits while retaining a 5% capital-to-assets ratio. As panel A of figure 1 shows, the bank needs $30 of equity and $570 of deposits if it does not use covered bonds. Assume that the bank replaces the $200 of insured deposits with covered bonds. Since total assets and total liabilities remain the same as when insured deposits are used, the amount of equity needed does not change, as shown in panel B of figure 1.

The key question is what happens if the bank becomes insolvent. To see this, assume that because of loan defaults, the home mortgages fall from $200 to $150 in value and the other assets are reduced from $400 to $350 in value. Then, as given in the first example (first row of figure 2), the net obligation of deposit insurance is $70 for traditional financing, since there are $570 in insured deposits and the assets are worth $500. The obligation is the same for covered

bonds (second row of figure 2), since the FDIC must both cover the $50 in losses to the covered bond pool and pay the insured depositors $370 from the $350 in other assets.[11] The cost to the FDIC is the same as if it were offering insurance to holders of the covered bonds. It is worth noting that this effective insurance of covered bonds does not currently require any deposit insurance premium, although the FDIC has proposed imposing higher premiums on institutions with a significant reliance on secured liabilities such as covered bonds.

Using covered bonds to replace uninsured deposits can increase losses to the FDIC. For the second example in figure 2, assume that, as in the first example, a bank has $200 in mortgages and $400 in other assets but that all deposits above $300 are uninsured. In default, the FDIC pays off $300 to insured depositors and then splits the value of the assets with uninsured depositors proportionate to the share of total deposits each group has. For traditional financing, the bank has $300 in insured deposits and $270 in uninsured deposits. If the bank defaults because the value of its assets falls to $500, then, to cover its payments to insured deposits, the FDIC gets $263.16, 53% of the $500 value of the assets, since insured deposits are 53% of total deposits ($300 of the $570 in deposits). This means that the insurer pays out $36.84 more than it receives (third row of figure 2). When the bank replaces $200 in uninsured deposits with covered bonds, it reduces total deposits to $370 and uninsured deposits to $70. It also reduces the assets remaining for the FDIC to split with uninsured depositors by the $200 due to holders of the covered bonds. As shown in the fourth row of figure 2, when the value of assets falls to $500, this increases the liability of the insurance fund to $56.76. After setting aside $200 for holders of the covered bonds, the FDIC gets $243.24, or 81% of the $300 remaining value, since insured deposits are 81% of total deposits. As noted before, the cost to the FDIC is the same as if it insured the bondholders.

If banks use covered bonds for new lending, this also can increase the losses to the FDIC from bank failures. To see this, for the third example (fifth row of figure 2), start with the bank portfolio in the first example, but now assume that the bank can make an additional $100 in mortgages and issue covered bonds to finance them. This means the bank issues a total of $300 in covered bonds. When the bank defaults, assume that the mortgages are worth $200 and other assets are worth $350. The FDIC owes $370 to insured depositors and must give holders of the covered bonds $300, assuming the collateral is at least that value. Since the other assets are worth $350, the loss to the FDIC is $120. This loss is greater than when the bank had the same insured deposits but less in covered bonds (as in the second row of figure 2). The FDIC faces more exposure because the holders of the new covered bonds move in front of the FDIC in bankruptcy priority. There is a trade-off between lending and the deposit insurance fund.

Covered bonds offer an alternative to securitization as a means to finance mortgages.

Conclusion

Allowing banks to issue covered bonds can increase the risk to the deposit insurance fund, but *only* to the extent that it allows banks to replace uninsured deposits or increase lending. Permitting holders of the covered bonds first access to the collateral pool is effectively a judgment that the increased ability of banks to issue mortgages is socially valuable enough to be worth the risks to the deposit insurance fund.

[1] In July 2008, the Federal Deposit Insurance Corporation issued a policy statement on covered bonds explaining how these bonds would be treated if an issuing bank fails (www.fdic.gov/regulations/laws/federal/2008/08policy728.pdf) and the U.S. Department of the Treasury issued a best practices statement on covered bonds (www.treas.gov/press/releases/reports/USCoveredBondBestPractices.pdf). Coincident with the Treasury statement, four large U.S. banking organizations (Bank of America, Citigroup, JPMorgan Chase, and Wells Fargo) announced the intent to issue some of these bonds (see, e.g., Floyd Norris, 2008, "A new way to generate mortgages," *New York Times*, July 29, available at www.nytimes.com/2008/07/29/business/economy/29place.html, and Deborah Solomon, 2008, "Banks act to aid mortgage lending," *Wall Street Journal*, July 29, available by subscription at www.wsj.com/article/SB121727042664390535.html).

[2] A bank may sell covered bonds directly to investors, but it usually sells mortgage bonds to a legally separate trust (a special-purpose vehicle). The trust then sells bonds to investors where the payments investors get are "covered" by payments on the bonds sold to the trust.

[3] The FDIC may, alternatively, continue payment on the bonds.

[4] The FDIC also places restrictions on maturity and requires consent of the primary federal regulator of the bank. See the FDIC policy statement cited in note 1.

[5] In many cases, the minimum level of overcollateralization is set by law or regulation. The U.S. Department of the Treasury states that overcollateralization should be at least 5% of the principal balance (see the July 28, 2008, Treasury press release, No. HP-1102, available at www.treas.gov/press/releases/hp1102.htm).

[6] There have been no defaults on covered bond issues since at least 1899 (Orrick, Herrington, and Sutcliffe LLP, 2008,

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"FDIC issues covered bond policy statement," structured finance client alert, April, available at www.orrick.com/fileupload/1362.pdf).

[7] The dollar value of MBS issuance by private financial institutions in the first half of 2008 was over 90% below its level during the first half of 2007 (Inside Mortgage Finance Publications, 2008, "Commercial MBS production stuck in the doldrums as real estate markets continue to slow in 2Q08," *Inside MBS and ABS*, Vol. 2008, No. 31, August 1, available by subscription at www.imfpubs.com/issues/imfpubs_ima/2008_31/news/1000009728-1.html). The losses on subprime loans had less effect on the conforming loan market, which uses the government-sponsored entities Fannie Mae and Freddie Mac to securitize the loans. Thus, banks can still originate to distribute conforming loans. They would be unlikely to use conforming loans to collateralize covered bonds.

[8] See the Treasury press release, No. HP-1102, cited in note 5.

[9] For a more complete explanation of MBSs and their role in mortgage lending, see Richard J. Rosen, 2007, "The role of securitization in mortgage lending," *Chicago Fed Letter*, Federal Reserve Bank of Chicago, No. 244, November.

[10] For simplicity, this assumes there is no overcollateralization. The qualitative results are the same if there is overcollateralization.

[11] If the decline in collateral value for the covered bond pool occurs late enough so that the pool is not restored to its initial value prior to the bank's failure, the losses to the FDIC could be smaller, since the FDIC policy statement (in note 1) says that the FDIC is only required to pay out the collateral value to holders of the bonds.