

De-Risking Banks through Synthetic Securitization and Credit-Linked Note

Issuance

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U.S. banks are increasingly using synthetic securitization to allocate regulatory capital more efficiently by transferring credit risk to outside investors through the issuance of credit-linked notes. This post outlines the economic motivations for such transactions, summarizes the two existing transactions structures, and identifies instances where the federal government mandates similar risk transfer to reduce taxpayer exposure.

Economic Motivations

Consider a hypothetical loan portfolio with a known historical loss distribution for similar assets. The expected loss, or mean of the historical distribution, will be directly priced into the loans at origination. Any unexpected losses are intended to be absorbed by economic capital held by the lender, with the required return on this capital also being priced into the loans.

If a bank holds this loan portfolio, it will be subject to regulatory risk-based capital requirements that are set independently of the underlying loss distribution. For example, under the standardized approach, risk-weighting for performing loans held on bank balance sheets is 100%, which implies an 8% capital requirement (12 CFR 217.32). (One exception is the weighting for performing residential mortgages which is set at 50%, representing a 4% capital requirement.) This coarse approach ignores differences in historical loss rates across loan types, as well as variation in losses within asset classes that depend on observed borrower or loan characteristics (e.g., loans to prime versus subprime borrowers).

In situations where banks are required to hold regulatory capital well above the economic capital implied by the historical loss data, they will have an incentive to reallocate such excess regulatory capital to support other credit exposures for which economic capital and regulatory capital are better aligned. Banks have recently begun doing this through synthetic securitization and the

issuance of credit-linked notes. Unsurprisingly, the most popular assets for such risk transfer have been prime-quality auto loans and residential mortgages where regulatory capital requirements far exceed economic capital implied by their historical loss distributions.

Credit-linked note transactions involve the issuance of securities to outside investors for cash, where the principal amount due on the notes is reduced if there are losses on a reference pool of loans exceeding a given threshold. Hence note investors are providing credit protection to the bank on the reference pool. Importantly, these transactions are pre-funded and hence the bank faces no counterparty risk, unlike alternative credit risk mitigants like credit default swaps.

These transactions are structured as synthetic securitizations that convert whole loan exposures to securitization exposures for regulatory capital purposes. Notes are then issued to outside investors to insure against unexpected losses, with commensurate attachment and detachment points for loss exposure. By reducing exposure to unexpected losses, these risk transfers lower the amount of regulatory capital that banks are required to hold against the loan pool.

Consider a \$1 billion pool of loans subject to an 8% capital requirement (\$80 million) if held on a bank balance sheet. Now assume that this pool of loans is synthetically securitized using a simple waterfall structure with the bank holding the senior tranche (87.5%), the investor purchasing the mezzanine tranche (11.75%), and the bank retaining the residual tranche (0.75%). Under the simplified supervisory formula approach applicable to securitization exposures, the regulatory capital requirement for each tranche would be:

- Senior tranche: 1.6% capital requirement (20% risk-weight). $1.6\% * 87.5\% * \$1 \text{ billion} = \$14 \text{ million capital requirement.}$
- Mezzanine tranche would be 0% capital requirement (0% risk-weight). $0\% * 11.75\% * \$1 \text{ billion} = \$0 \text{ capital requirement.}$
- Residual tranche: 100% (1250% risk weight). $100\% * 0.75\% * \$1 \text{ billion} = \$7.5 \text{ million capital requirement.}$

As a result, the banks' required regulatory capital for the loan pool would decline from \$80 million to \$21.5 million.

The arithmetic underlying the capital treatment of cash and synthetic securitizations is the same. However, since 2010 under Generally Accepted Accounting Principles (GAAP), a cash securitization transaction using a bankruptcy remote special purpose entity is required to be consolidated on the banks' balance sheet if it retains a beneficial interest in the transaction, as is typical. Bank capital regulations follow this accounting treatment and hence require that the bank continue to hold capital against all the consolidated assets. As a result, it is more capital efficient for a bank to use a synthetic securitization structure.

Two Types of Synthetic Securitization Transactions

Banks have conducted synthetic securitizations either directly or through a special purpose entity (SPE). In either case, the reference loan portfolio remains on the bank's balance sheet and the associated credit risk is transferred to outside investors through the issuance of credit linked notes.

With directly issued credit-linked notes, the bank sells the securities directly to outside investors. Because the cash proceeds are not necessarily held in a segregated third-party account, the investors do face a risk of non-payment as counterparty to the bank.¹ As a result, the credit rating assigned to the notes is that of the bank and hence these types of transactions have only been conducted by large banks with public ratings.

A bank may also indirectly sell credit-linked notes to outside investors through a SPE. Here the bank purchases loss protection in the form of a credit derivative or financial guarantee from the SPE relating to a particular tranche of synthetically securitized referenced assets. The SPE contemporaneously issues the credit-linked notes and deposits the proceeds into a trust account for the benefit first of the bank and then the investors. A broader set of banks may avail themselves of these transactions as investors are protected from counterparty credit risk by the cash residing in the trust account and hence a public rating is unnecessary.

¹ Note that it is possible for the issuing bank to deposit the cash proceeds with a third-party bank and pledge that deposit account for the benefit of the investors in the credit-linked notes.

The ability of a bank to obtain recognition for the credit risk transfer accomplished through a credit-linked note transaction depends on whether the transaction has been structured in accordance with the capital rules. The form of the transaction and the instruments and agreements used to transfer the risk must meet certain definitional requirements.

With a credit-linked note transaction using an SPE structure, the bank accepts the cash proceeds of the notes held by the trust as collateral in support of the SPE performing on the credit derivative. Under regulatory capital rules, a bank can recognize the credit risk mitigation of the collateral on the reference portfolio under the rules for synthetic securitizations if certain conditions are met. In particular, the transaction must satisfy operational and due diligence requirements for securitization exposures (12 CFR 217.41) or operational and due diligence requirements for risk transfer recognition (12 CFR 217.141), and the definition of a “synthetic securitization” (12 CFR 217.2).

When a bank directly issues credit-linked notes that reference loans on its balance sheet, the Federal Reserve is unclear about whether the transaction satisfies the definitional requirements of a synthetic securitization or related operational requirements. The Federal Reserve’s Frequently Asked Questions about Regulation Q notes the following.²

First, a synthetic securitization must include a guarantee or credit derivative and, in the case of a credit derivative, the derivative must be executed under standard industry credit derivative documentation. Directly issued credit-linked notes frequently reference, but are not executed under, standard industry credit derivative documentation. Second, the operational criteria for the simplified supervisory formula approach (SSFA) require use of a recognized credit risk mitigant, such as collateral. The cash purchase consideration for directly issued credit-linked notes is property owned by the note issuer, not property in which the note issuer has a collateral interest.

² <https://www.federalreserve.gov/supervisionreg/legalinterpretations/reg-q-frequently-asked-questions.htm>

The Federal Reserve nonetheless has recognized that the way a directly issued credit-linked-note transaction transfers risk is like other risk-mitigation practices it recognizes in its capital regulation. Hence, since October 2023, the agency has been willing to consider recognizing the risk-mitigating benefits of credit-linked note transactions on a case-by-case basis (reservation of authority) and some petitions have been granted.³ In each case, the Federal Reserve is allowing the petitioning bank to engage in additional transactions provided they are substantially similar although the aggregate amount of the reference portfolios is capped at the lower of 100% of the issuer's total capital or \$20 billion.⁴

The Federal Government Mandates Similar Transactions to Reduce Taxpayer Exposure

The use of synthetic securitization and issuance of credit-linked notes by banks is very similar to transactions carried out over the past decade by Fannie Mae and Freddie Mac. Since 2013, the two government-sponsored enterprises (GSEs) have engaged in credit risk sharing programs at the direction of the Federal Housing Finance Agency (FHFA) to reduce taxpayer exposure while the two institutions remain in federal conservatorship.⁵ These risk transfer programs take several forms, but the issuance of credit-linked notes through an SPE that references pools of newly acquired single-family mortgages has been the largest.⁶ The FHFA reports that through year-end 2023 these GSEs have issued credit-linked notes with \$138 billion of risk-in-force, which principally acts as a substitute for equity capital.⁷

Another example of prudential regulators mandating mezzanine risk transfer to outside investors is bank regulators long-term debt requirements. Since 2022, globally systemically important banks have been subject to such requirements and regulators recently issued a proposal to subject all

³ <https://www.federalreserve.gov/supervisionreg/legalinterpretations/reg-q-frequently-asked-questions.htm>

⁴ https://www.federalreserve.gov/supervisionreg/legalinterpretations/bhc_changeincontrol2023.htm

⁵ For an extensive overview, see: David Finkelstein, Andreas Strzodka, and James Vickery (2018) "Credit Risk Transfer and De Facto GSE Reform" Federal Reserve Bank of New York Economic Policy Review, 24(3):88-116.

⁶ These programs are Connecticut Avenue Securities (Fannie Mae) and Structured Agency Credit Risk (Freddie Mac).

⁷ <https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/CRT-Progress-Report-4Q23.pdf>

other institutions with more than \$100 billion in assets to face similar provisions.⁸ Federal Reserve staff estimates that there is currently about \$180 billion of bank long-term debt outstanding today, with the proposal requiring an additional \$70 billion.⁹

Long-term debt is in a deeply subordinate position in a bank capital structure, given the large share and priority of deposit liabilities. As a result, the principal on these securities is at risk in the event of bank failure as the requirement is designed to provide resolution resources. Hence one may view bank long-term debt as representing the bank's transfer to investors of a mezzanine risk exposure to the bank's entire asset portfolio. This is similar in spirit to credit-linked notes transactions that reference sub-portfolios of loans using synthetic securitization.

A Brief Response to Criticisms

We have described how bank synthetic credit risk transfer through credit linked notes provide the institution with loss protection and is consistent with existing regulatory mandates to transfer risk from GSEs and banks to limit potential taxpayer exposure. Nonetheless, there are skeptics of bank synthetic credit risk transfer activity. For example, former FDIC Chair Sheila Bair, has raised financial stability concerns about outside investors absorbing bank risk through credit-linked notes.¹⁰ While acknowledging the resilience of this pre-funded risk-transfer for banks, she points to the broader migration of financial risk outside of the regulated banking sector and reduced demand for new securities offerings during more restrictive credit environments.

While there has been a long-term trend towards more financial intermediation outside of the banking system, bank credit risk transfer transactions represent a minimal amount of this activity. Moreover, the type of risk being transferred from banks to outside investors in these transactions is analogous to the regulatory long-term debt requirement. Another criticism is that demand for these transactions may decline during a credit downturn as investors reduce their risk appetite. A reduction in risk appetite during a credit downturn is a trait generally shared by all credit-sensitive

⁸ <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20230829a.htm>

⁹ <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20230829a3.pdf>

¹⁰ <https://www.ft.com/content/420d0420-0cf6-4825-93dd-9a1c4b6d7760>

investors. More importantly, any reduction in the risk appetite of investors for future credit-linked note transactions has no bearing on the credit protection already provided by investors in existing deals since they are pre-funded.

Closing

Banks have begun using synthetic securitization to manage regulatory capital more efficiently by transferring credit risk to outside investors through the issuance of credit-linked notes. These privately initiated transactions are consistent with regulatory efforts to reduce taxpayer exposure to large financial institutions, such as the GSEs credit risk transfer programs and bank long-term debt requirements.