Banking Trends

Synthetic Risk Transfers

Many U.S. banks use financial instruments to reduce regulatory capital and hedge credit risk.

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In 2023, the Federal Reserve's Board of Governors (FRB) issued a set of FAQ about a seemingly esoteric financial instrument called a synthetic risk transfer (SRT).[1] The FAQ spurred rapid growth in the U.S. market for SRTs, which allow banks to transfer some of the risk of their loans to outside investors. In this article, we describe these financial instruments, explain how banks can benefit from them, provide an overview of the market's size and growth, and highlight potential risks as the use of SRTs increases.

*See **A Synthetic Risk Transfer by Any Other Name***

Defining a Synthetic Risk Transfer

An SRT is a combination of a portfolio of loans and another financial instrument that together mimics a securitized financial product.[2] To create an SRT, a bank pays a third party for credit protection against a portfolio of loans on its balance sheet. The bank's goal is to transfer a portion of the credit risk of its loans to an outside investor, who will then cover the bank's losses if some

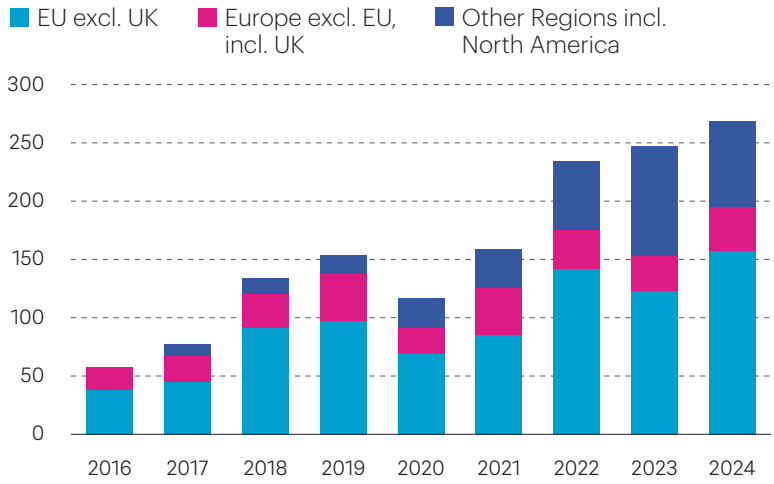
Key Takeaways:

- Banks issue synthetic risk transfers (SRTs) to hedge credit risk and optimize regulatory capital.
- U.S. capital rules allow banks to use SRTs to reduce the capital they are required to hold against possible losses, increase their returns relative to their capital, and create an opportunity to increase lending to their customers.
- In the U.S., the total amount of outstanding SRTs as of the fourth quarter of 2024 was $170 billion.
- The market experienced substantial growth following the Federal Reserve's publication of its frequently asked questions (FAQ) related to SRTs in 2023.
- If not well structured, SRTs could increase risk to banks and the broader financial system.

FIGURE 1

Synthetic Securitization Volumes Have Grown in Recent Years

Underlying pool size of synthetic securitization at inception by issuer region, billions of U.S. dollars



Data Source: International Association of Credit Portfolio Managers (2024)

Note: Authors converted euros to dollars.

of the bank's borrowers default on their loans. Unlike an actual securitized product, in which the bank sells loans to a third party, the underlying loans of an SRT remain on the issuing bank's balance sheet.

The fact that SRTs mimic securitizations is important because, according to U.S. capital rules, SRTs are treated similarly to securitized products. By using an SRT, a bank can reduce its risk-weighted assets (RWA)[3] and thus the amount of capital it is required to hold—just as it would if it had created a securitized product to sell to an outside investor, but without having to sell some of its loans. Thus, an SRT allows a bank to keep loans on its balance sheet while reducing credit risk and reducing the capital it is required to hold.

Types of Synthetic Risk Transfers

There are three main types of transactions that keep the underlying loans on the bank's balance sheet while shifting credit risk outside the bank. A credit default swap (CDS) is a derivative where the bank buys credit protection, paying a regular premium to the protection seller. A credit-linked note (CLN) is a debt security that references a portfolio of loans on the bank's balance sheet. Whoever buys a CLN receives interest payments from the bank but loses principal if some of the underlying loans default. In the third main type of transaction, a third party provides the bank a guarantee such as a letter of credit that covers future loan losses. There are strict guidelines in the U.S. capital rule on what type of firm may provide the guarantee.

How SRTs Help Banks

There are three key benefits for a bank that issues an SRT: credit hedging, a reduction in its RWA, and a higher return relative to capital.

Banks use SRTs to hedge credit risk by buying credit protection for loans on their balance sheets, usually for the first 12–15 percent of losses.[4] This protects them against future losses. If structured in a certain way, these transactions can even be fully cash funded. The investors who provide credit protection can pay the bank the full amount of potential loan losses up front, and the bank holds onto those funds. If there are no losses on the loan portfolio, the bank returns the cash to the investors.

Banks like SRTs because they relieve their capital requirements. Under U.S. capital rules, if a bank uses an SRT, its RWA is reduced by a commensurate amount, thus decreasing the amount of capital it must hold.[5]

*See **How a Hypothetical Bank Can Use an SRT***

The SRT Market

One challenge for understanding the market for SRTs is the lack of data. There is no single regulatory reporting requirement for SRTs, and generally only large or internationally active banks are required to report information on synthetic securitizations.

The Global Market

The International Monetary Fund (IMF) recently provided some valuable insight into the global market for SRTs.[6] Recently updated data about SRTs through 2024 show that over $1.4 trillion in underlying assets have been synthetically securitized since 2016 (Figure 1). Although these data are useful for analyzing the global SRT market, they can only obliquely tell us about the U.S. market.

The U.S. Market

In the United States, the Federal Reserve has nonpublic data obtained through bank supervisory activities. We used these data and certain vendor data sets to estimate U.S. market activity.[7] Because there is not a requirement for all U.S. banks to disclose information about SRTs, we do not have data on all of the banks, so our findings may underestimate the total U.S. market for SRTs.

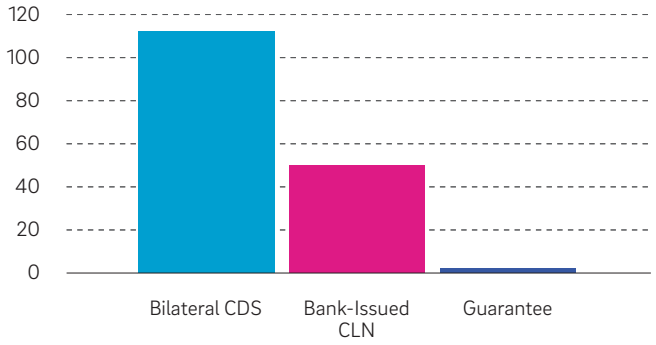
As of the fourth quarter of 2024, the total value of outstanding SRTs in

FIGURE 2

Roughly Two-Thirds of Outstanding SRTs in the United States Are Bilateral CDS

This high share may be a result of the wording of the U.S. regulatory definition of synthetic securitizations.

U.S. synthetic securitization by deal type, current collateral balance as of 12/31/24, billions of U.S. dollars



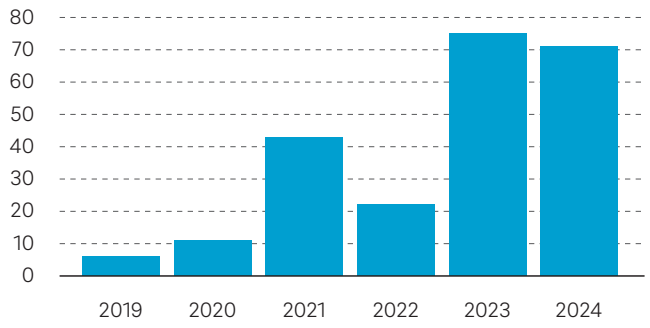
Data Source: FRB Philadelphia RADAR US SRT Database

FIGURE 3

The Volume of SRTs Issued in the United States Has Grown Substantially

Most of this surge occurred after the FRB issued its SRT FAQ in September 2023.

U.S. synthetic securitization issuance balance as of 12/31/24, billions of U.S. dollars



Data Source: FRB Philadelphia RADAR US SRT Database

the United States was $170 billion. The data suggest that roughly two-thirds of this balance is in the form of bilateral CDS (Figure 2). This high share may be a result of the U.S. regulatory definition of "synthetic securitizations."[8]

In the United States, SRT activity is not limited to large banks. As of the fourth quarter of 2024, at least seven banks with assets below $100 billion had issued SRTs.

The volume of SRTs issued in the United States grew substantially in 2023 and 2024 (Figure 3). Not coincidentally, in September 2023 the FRB published its SRT FAQ, and a large portion of that year's issuance occurred after that date. Although neither the IMF data set nor the FRB data set gives us a complete picture of this market's growth in the United States, the two together strongly suggest that this market is growing rapidly in size and importance.

The Key Risks of SRTs

Although these transactions can provide valuable credit hedging for banks, they may also create risks. As with most complex financial instruments, the way an SRT is structured determines the risk it creates and who bears that risk. The IMF,[9] the CFA Institute's Systemic Risk Council,[10] U.S. Senator Jack Reed (D-RI),[11] and former Federal Deposit Insurance Corporation Chair Sheila Bair[12] have all flagged potential concerns. Below we highlight two fundamental risks in the SRT market.

Unfunded SRTs

SRTs allow banks to hedge potential loan losses by transferring the risk of loss to third parties. In most transactions, the protection provided to banks is fully cash funded up front. For bank-issued CLNs, for example, investors must pay the purchase price of the notes at issuance. However, U.S. capital rules allow unfunded SRTs under some conditions, so not all SRTs are fully funded. In those cases, the bank that issues the SRT becomes exposed to counterparty risk, which is the risk that the protection provider will not be able to pay for loan losses as required by the SRT. The counterparty risk is most concerning in an economic downturn when both the bank and the investor could experience financial stress.

Banking System Interconnectedness

In addition to the benefits for individual banks, SRTs can make the financial system more resilient. SRTs can transfer credit risk from banks—which are exposed to the threat of runs by their depositors—to investors outside the banking system. Because those investors typically do not rely on deposits for their funding as banks do, the risk of a run is lower for them. This means they are better positioned to absorb losses without jeopardizing financial stability.

However, there are some types of SRT transactions that increase bank interconnectedness and as a result, could increase risk to the banking system. For example, SRTs in which one bank provides credit protection to another bank may jeopardize financial stability. In this case, the bank providing credit protection is exposed to the credit risk of the other bank's loan portfolio. Although there is a transfer of risk, the potential loan losses stay within the banking system rather than being dispersed among external investors.

Financing is another channel by which SRTs may increase bank interconnectedness and thus, increase systemic risk. For example, if an external investor buys a junior tranche[13] of CLNs from a bank, those notes can be pledged as collateral for a loan from another bank. In that transaction, some of the credit risk that was originally transferred to the external investor returns to the banking system.

TABLE 1

A Hypothetical SRT Scenario

Because the SRT increases the bank's RoRAC from 6 percent to 24 percent, the return on its required capital has quadrupled.

	Prime Auto Loans *No SRT*	**Prime Auto Loans with SRT** *Bank retains 87.5 percent*
Loans Pool Size	$100	$100
Retained Exposure	$100	$87.5
Interest Rate on Loan	6%	6%
Income on Loans	$6	$6
Interest Paid to Investors	0%	14%
Cost of Hedge	--	$1.75
Income on Loans (Net of Hedge)	$6	$4.25
Applicable Risk Weight	100%	20%
Risk-Weighted Assets	$100	$17.5
Return on Risk-Weighted Capital	6%	24%

Note: All dollar amounts in millions.

How a Hypothetical Bank Can Use an SRT

Bank A holds $100 million of prime auto loans on its balance sheet, earning 6 percent interest on its portfolio. Under the capital rule, auto loans receive a 100 percent risk weighting, so the bank's risk-weighted assets (RWA) for these loans is $100 million. The bank earns $6 million in interest and its RWA is $100 million, so on a return on risk-adjusted capital (RoRAC) basis, the bank earns $6 million, or 6 percent.

Bank A then enters into a credit default swap (CDS) agreement in which the investor who provides the credit protection agrees to cover the first $12.5 million in loan losses on the portfolio (Figure 4).

As compensation for covering potential losses up to $12.5 million, Bank A pays the investor 14 percent interest on the $12.5 million, or $1.75 million. The bank keeps all the loans on its balance sheet, so it still earns $6 million in interest on its portfolio, but it must now pay the investor $1.75 million. Thus, the bank's net income is $6 million minus $1.75 million, or $4.25 million.

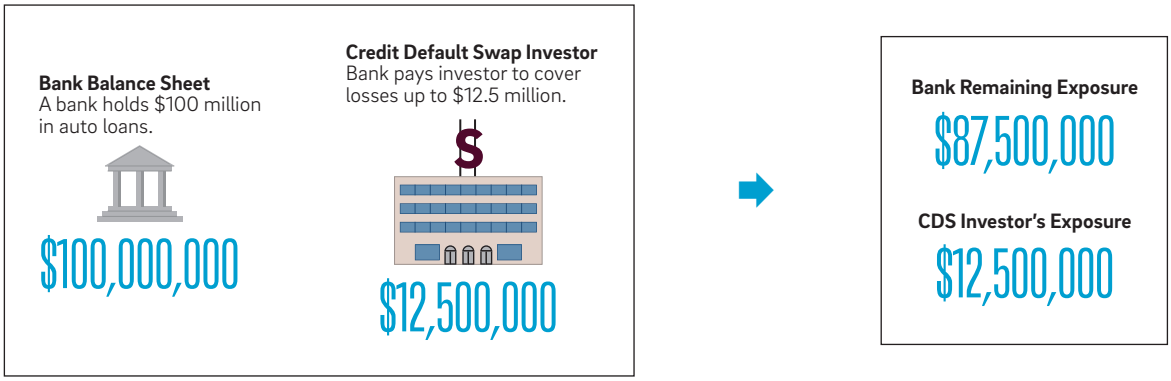
The combination of the loan portfolio and the CDS creates the SRT. Based on the U.S. capital rule, the bank will have to hold only 20 percent capital for the $87.5 million in credit exposure remaining after accounting for the CDS. (The assumption is that a loss in excess of the insured $12.5 million is highly unlikely.) The bank's RWA is $87.5 million x 0.20 = $17.5 million, which means that the bank's RoRAC is $4.25 million / $17.5 million = 24 percent.

Because the SRT increases Bank A's RoRAC from 6 percent to 24 percent, the return on Bank A's required capital has quadrupled (Table 1). The decrease in required capital from the SRT gives Bank A the option of increasing lending without raising new capital.

This hypothetical example shows how the reduction in their required capital can incentivize banks to issue SRTs. As Francisco Covas and Benjamin Gross explain in their 2024 blog post, SRTs "are particularly appealing when regulatory capital requirements significantly exceed the actual risk of the loans."

FIGURE 4

A Hypothetical Bank Creates an SRT



Conclusion

If structured well, SRTs offer many benefits. They can help banks hedge their credit risk, reduce their required capital, and expand lending to their customers. In addition to the benefits for banks, SRTs can provide an attractive risk-return tradeoff for external investors[14] and reduce systemic risk in the financial system. However, as with any complex financial instrument, these transactions are not risk-free. Banks, investors, and banking supervisors should pay close attention to the specific structure of each SRT transaction to ensure that SRTs provide those benefits without creating unintended risks.

A Synthetic Risk Transfer by Any Other Name

Although "synthetic risk transfer" (SRT) is widely used by financial market participants in the United States, not everyone uses that term. Under EU and UK capital rules, SRT refers to "significant risk transfer"; U.S. capital rules use "synthetic securitizations" for similar transactions.

To complicate matters further, some market participants use the acronym CRT, which for them means either "capital relief trade" or "credit risk transfer." Although "CRT" does not appear in the capital rules, the term generally has the same meaning as SRT or synthetic securitization.

The nomenclature is confusing, but the bottom line is that these are different names for similar types of transactions that transfer credit risk to third parties.

Notes

1 Board of Governors (2023).

2 Securitization refers to the process by which a bank packages loans together to create financial instruments that can be bought and sold.

3 Risk-weighted assets (RWA) reflect the varying levels of risk associated with different types of assets held by a bank. By assigning higher weights to riskier assets, regulators require the bank to hold more capital for the riskier assets, which gives the bank greater capacity to absorb losses. Under current regulations, for example, U.S. treasuries receive a 0 percent risk-weighting, which implies the debt is riskless, so the bank is not required to hold any capital against potential losses. Auto loans, on the other hand, generally receive a 100 percent risk-weighting, so the bank would have to hold capital against the full amount of those loans.

4 This amount of protection minimizes the risk-weighted assets on the senior tranche retained by the bank. In the United States, SRTs that reference different loan types tend to protect 12.5 percent of the loan amount, which produces the lowest possible risk weighting (20 percent) for the senior tranche.

5 For more details on how SRTs work, see Simmons et al. (2024) and Horn et al. (2024).

6 International Monetary Fund (2024).

7 In some cases, non-U.S. banks issue loans in U.S. dollars to U.S. companies but only take the RWA relief at the non-U.S. parent level. We do not include those transactions in our analysis. In other cases, U.S. banks issue loans denominated in euros to European borrowers but take the RWA benefit at the U.S. consolidated parent company. These transactions we do include.

8 One of the definitional requirements of "synthetic securitization" within the U.S. capital rule is the use of a credit derivative or a guarantee; the FAQ provided an avenue for CLNs, which are issued as securities but require Federal Reserve Board review and approval.

9 International Monetary Fund (2024).

10 CFA Institute (2024).

11 Reed (2023).

12 Bair (2023).

13 A junior tranche of a security is one with lower repayment priority than other tranches. If the referenced loans default, the owners of the junior tranche will take the first losses.

14 See Khanna et al. (2024) for a discussion of potential benefits for SRT investors.

References

Bair, Sheila. "Regulators Must Resist Banks' Magical Thinking," *Financial Times*, December 11, 2023, https://www.ft.com/content/420d0420-0cf6-4825-93dd-9a1c4b6d7760.

Board of Governors of the Federal Reserve System. "Frequently Asked Questions About Regulation Q" (2023), https://www.federalreserve.gov/supervisionreg/legalinterpretations/reg-q-frequently-asked-questions.htm.

CFA Institute Systemic Risk Council. Letter to Chair Powell, September 18, 2024, https://www.systemicriskcouncil.org/2024/09/cfa-institute-systemic-risk-council-writes-in-support-of-addressing-the-growing-systemic-vulnerabilities-posed-by-credit-risk-transfer-transactions/.

Covas, Francsico, and Benjamin Gross. "The Economics of Synthetic Risk Transfers," Bank Policy Institute (2024), https://bpi.com/the-economics-of-synthetic-risk-transfers/.

Horn, Christopher B., Jed Miller, Andrew Karp, and Ivan Loncar. "Credit Risk Transfers (CRTs): A Handbook for U.S. Banks," Cadwalader, Wickersham & Taft (2024), https://www.cadwalader.com/resources/articles/credit-risk-transfers-crts-a-handbook-for-us-banks.

International Association of Credit Portfolio Managers (IACPM) Global SRT Bank Survey 2016–2024 (2024), https://iacpm.org/iacpm_global_srt_bank_survey_2024/.

International Monetary Fund. "Global Financial Stability Report" (2024), https://www.imf.org/en/Publications/GFSR/Issues/2024/10/22/global-financial-stability-report-october-2024.

Khanna, Varun, Christopher Mellia, and Vaibhav Piplapure. "Significant Risk Transfers: Is There Really an Endgame in Sight?" KKR Insights (May 2024), https://www.kkr.com/insights/asset-based-finance-srt.

Reed, Jack. Letter to banking agencies regarding synthetic risk transfers, November 29, 2023, https://www.reed.senate.gov/imo/media/doc/letter_to_banking_agencies_re_synthetic_risk_transfers.pdf.

Simmons, Robert, Guy Antrobus, Parya Badie, et al. "Credit Risk Transfer and Significant Risk Transfer Trades: An Introductory Guide for Issuers and Investors," A&O Shearman (June 2024), https://www.aoshearman.com/en/insights/crt-and-srt-trades-an-introductory-guide-for-issuers-and-investors.