

AAA CLOs Not a Threat to Financial System; Lower-Tranche CLOs Are at Risk

Companies: BK, BX, C, CG, ECC, JPM, WFC

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Research Question:

How much of a threat does the leveraged loan and collateralized loan obligation market represent for the financial system?

Summary of Findings

- The collateralized loan obligation (CLO) industry is a "tale of two markets." In the upper tranches (AAA, AA, and A rated) there is no threat to large banks or the financial system as a whole.
- The higher-rated CLOs are considered bulletproof or rock solid and have performed as designed through many credit cycles. According to two sources, no AAA CLO has ever lost money when held to maturity. They are transparent, diversified, and considered very low risk. There may be some volatility during the duration of the CLO, but they are secure.
- In the lower-tranche CLO market, investors are facing significant stress. CLOs are expected to suffer increasing downgrades and defaults (3% to 15% year-to-year default rates were discussed) but they are still not expected to materially impact the financial system as a whole. If investors are involved with good CLO managers like <u>The Carlyle Group Inc.</u> (CG) or <u>Oaktree Capital Management LP</u> they will have the opportunity to participate and profit from corporate reorganizations.
- Hedge funds, pension funds, specialized credit funds, small banks, and any investment fund involved in the lower CLO tranches are likely to face losses. One source said some prominent CLOs have suffered significant losses and he singled out three hedge funds: Prophet Capital Asset Management LP, Hildene Capital Management LLC, and Eagle Point Credit Company Inc. (ECC).
- The COVID-19 economic shutdown is the primary culprit for the stress in the CLO market and full relief is not expected until there is a COVID-19 vaccine. Several sources, however, pointed to stress before the COVID-19 shutdown, brought on in part by challenges in the oil and gas industry and retail industries. Since the shutdown, leveraged loans across a broad spectrum of industries including housing, gaming, lodging, restaurants, travel and leisure, metals and mining, healthcare, and commercial real estate are all under stress and contributing to the pressure in the CLO markets.

Silo Summaries

1) Bank Executives

Three bank executives do not see CLOs as a threat to the financial system; however, some hedge funds and investors involved in the lower tranches of CLOs will see some losses. Banks typically invest in AAA-rated CLOs, which are considered safe, highly diversified, and transparent and, therefore, they face limited or no risk. The controversy regarding CLOs and their viability is exaggerated, according to one source—nothing like the subprime mortgage meltdown—and would require a 15% default rate for several years to create a crisis. COVID-19 and the oil and gas price war have led to some CLO downgrades. A sustained economic shutdown could stress the CLO market further and one source said defaults could hit 9% to 12%.

2) Investors Holding CLOs

All five CLO investors agree that CLOs are not a threat to the financial system or big banks holding AAA-rated tranches. All five sources also agree that the CLO market has issues and downgrades and defaults, especially in the lower tranches, are expected to increase due to COVID-19-induced economic instability. One said the CLO market is in a bit of a crisis and was before COVID-19 shutdowns, with some prominent CLOs suffering major losses. Sources pegged the default threat at between 3% to 15% by year's end. Hedge funds, investment funds, and investors holding the lower tranches will experience losses over the next six to 24 months. Industries facing challenges both before COVID-19 and now include oil and gas, metals and mining, retail, travel and leisure, and commercial real estate. The Fed is not looking to get directly involved in the CLO market but it has clearly signaled it is supporting the investment-grade credit market and providing liquidity, which has helped the CLO market.

3) Industry Specialists

Industry specialists were split on the level of risk CLOs are poising for the financial system; however, all six sources agree that downgrades and defaults are on the rise. Three sources think this does not threaten the overall health of the financial system, as AAA tranches of CLOs are secure. The other three sources think the downgrades, defaults, and bankruptcies will continue and even accelerate. Driven by the COVID-19 economic shutdowns, losses are expected for hedge funds, small banks, and investors focusing on the CCC and even B tranches. One source said the CLO ratings are currently inflated and as the rating agencies wake up and downgrade further there will be a problem.

	CLO Threat to Financial System	AAA CLO Risk	Lower-Tranche CLO Risk
Bank Executives	No Threat	No Risk	High Risk
Investors Holding CLOs	No Threat	No Risk	High Risk
Industry Specialists	Limited Threat	No Risk	High Risk

Background

Blueshift Research's initial research found some financial experts and the financial press waving the warning flag on the leveraged loan and CLO market being under significant stress. Some experts fear that an economic downturn, perhaps the one that began in February, will lead to a wave of loan defaults that will tear apart the CLO market, putting tremendous stress on the financial system. Others suggest this is a made-up problem and that CLOs are not a major risk to the banking system. Banks, insurance companies, mutual funds, hedge funds, and pension funds are all major CLO holders. How this situation plays out will have a direct impact on the financial health of these companies.

CLOs are a single security backed by a package of often risky corporate loans. They are typically divided into tranches from AAA all the way down. The CLO market is about \$700 billion total and is considered a cousin of collateralized debt obligations (CDO), which are backed by mortgages and were a leading cause of the 2008-2009 financial crisis.

A story in the July/August issue of The Atlantic paints a picture that CLOs have the U.S. financial system near ruin. The author claims that banks fell back into their old destructive habits and binged on leveraged debt and CLOs to the tune of more than \$1 trillion in outstanding loans. According to the story, 30 global banks have an average exposure to leveraged loans and CLOs of about 60% of capital on hand. Citigroup Inc. (C) reported \$20 billion worth of CLOs; JP Morgan Chase & Co. (JPM) has \$35 billion. Banc of California Inc. (BANC) and Stifel Financial Corp. (SF) have CLOs totaling more than 100% of their capital. If the CLO market were to crash, their liabilities could quickly become greater than their assets.

A May 1 Bloomberg article points out that CLOs could assume a major role in this recession. They are heavily exposed to industries suffering the most from the COVID-19 economic decline, including leisure, hotels/gaming, retail, and energy. UBS Group AG's (UBS) worst-case scenario of COVID-19 returning in waves until the middle of 2021 would lead to loan defaults of 22%. S&P Global Inc. (SPGI) has cut or put on watch for downgrade about one-fifth of the corporate loans that are collateral for CLOs. Moody's Corp. (MCO) said expected losses endangers the rating of \$22 billion of CLOs. These problems in the CLO market could produce a ripple effect and spread to other parts of the economy.

Some financial professionals take issue with these ominous warnings. In a direct reply to the Atlantic article, financial writer Nathan Tankus said the CLO market is one-third the size of the subprime mortgage market that contributed to the 2008 recession. He added that CLOs are 3.1% of the GDP today vs. subprime mortgage-backed securities that were 13.8% of GDP in 2008. Tankus also takes issue with the amount of risk facing the major banks, saying that the exposure of the Global Systemically Important Banks is minor. He points to Wells Fargo & Co.'s (WFC) \$29.7 billion in CLOs as less than 2% of it \$1.7 trillion in assets.

In another rebuttal to the Atlantic story, Bloomberg Opinion acknowledges that loan defaults are happening and CLOs are under pressure, but that AAA CLOs have never defaulted. Speculators are expected to face losses but financial giants like the major banks are likely to emerge unscathed.

In a short interview with Blueshift this week, a bank executive that deals with CLOs said, "The big risk for CLOs would be a collapse of the economic rebound that appears to have begun last month or a substantial rise in interest rates. Either of those scenarios would make it difficult for companies to repay the loans bundled in the CLOS."

Current Research

Blueshift Research assessed the threat level the leveraged loan and collateralized loan obligations market represent for the financial system. We employed our pattern mining approach to establish four independent silos, comprising 14 primary and three secondary sources focused on the leveraged loan and CLO industry. Interviews were conducted June 22-July 3.

- 1) Bank executives (3)
- 2) Investors holding CLOs (5)
- 3) Industry specialists (6)
- 4) Secondary sources (3)

Next Steps

Blueshift Research will continue to research the downgrades and defaults of leveraged loans within CLOs to determine how they will impact the CLO market and the overall financial system.

Silos

1) Bank Executives

Three bank executives do not see CLOs as a threat to the financial system; however, some hedge funds and investors involved in the lower tranches of CLOs will see some losses. Banks typically invest in AAA-rated CLOs, which are considered safe, highly diversified, and transparent and, therefore, they face limited or no risk. The controversy regarding CLOs and their viability is exaggerated, according to one source-nothing like the subprime mortgage meltdown-and would require a 15% default rate for several years to create a crisis. COVID-19 and the oil and gas price war have led to some CLO downgrades but if the COVID-19-related impact is short lived they will be fine. A sustained economic shutdown could stress the CLO market further and one source said defaults could hit 9% to 12%. Industries under stress include energy, retail, leisure/travel, restaurants, and transportation/automotive.

Kev Silo Findings

CLO Market Conditions

- 1 said the CLO market weathered some stress in March and April and it has shown recovery.
- 1 said the CLO market is safe, transparent, and diversified—nothing like the mortgage-backed securities market of 2008.
- 1 said underwriting standards have weakened, which could lead to a 9% to 12% default rate for lower-tranche CLOs. AAA and AA CLOs are safe but may experience some volatility; single-As will require a good manager.

CLO Controversy

- 1 said the CLO market is healthy, without the 'poisoned assets' that were in CDOs in 2008.
- 1 said the CLO market is nothing like the CDO market of the past.
- 1 said the CLO market is isolated and would have little impact on the overall market is there was a problem.

CLO Market Outlook

- 1 said the CLO market short-term outlook is mildly negative and long-term is neutral.
- 1 said the economy is in recession, CLOs have not collapsed, and unless all businesses go bankrupt CLOs will be
- 1 said if COVID-19 is short lived the CLO market will be fine; if it is prolonged there could be a 10% to 15% selloff.

1) CLO trader for a global bank

CLOs do not represent a threat to the financial system. Their structure is very different from the CDOs that caused the collapse of 2008. Even if the collateral quality has slipped a little over the past couple of years, there continues to be good visibility into the loans. Volume has been very high with new issues and secondaries, as well. There was some slowing in the market around the end of March because of COVID-19 and the downturn in oil and gas prices but it was



not a credit crisis. Currently, the CLO market is healthy. The short-term outlook for CLOs is slightly negative because of the new increase in COVID-19 cases; longer term it is neutral. The primary industries at risk of defaulting are oil and gas, housing, gaming, lodging, and retail. The investors who are at risk are hedge funds. Banks are not at risk. The worst-case scenario would be a continued lockdown because of COVID-19 and continued price wars in oil and gas. It would take 15% defaults sustained over several years to cause a crisis.

CLO Market Conditions

- "We've been weathering the crisis well. In March and April we saw a spurt of downgrades. That put significant stress on the product but it also showed its resilience. The product did what it was supposed to do. When there's trouble, cash flow is cut off to the bottommost tranches and the higher-rated ones are secured. There's definitely some stress in the high-yield area but it's designed for that."
- "The greater concern is not about the product being sound but whether what's underneath is sound. There have been articles about the decrease in covenant quality, the increase in leverage metrics, and that combination effect, along with that CLOs, are around 40% to 60% of the purchasers of leveraged loans. There has been some slippage in quality. I'm not sure if covenant-lite matters that much. Covenant-lite wouldn't matter too much if a loan gets in trouble. It'll be waived."
- "There has been some slippage but it's nothing like the 2008 crisis. These are all companies that have cash flow. They are big businesses and not just people underwriting loans to people who have no income. Though the collateral quality slipped a little over the past couple of years, it's not anywhere near what it was in 2008. We have visibility into these loans as well and there are no hidden pools that people don't know about where suddenly they'd find out one-third had defaulted. It's solid now compared to 2008."
- "Volume has been very high. We've had new issue and secondaries too. 40% to 60% of the bonds trading during the day are AAAs. It's the most liquid shelf. 50% is new issuance compared to last year. There are still new ones being issued but at wider prices than previously."
- "The slippage is because of COVID-19 but also because of the downturn in oil and gas prices, which happened around the same time. There is less oil and gas exposure than in 2015/2016 when there was a sharp drop in CLOs because they had a higher exposure. Pricing wise, at the height of the crisis, if you wanted to issue something that would be bought by buyers, it would have to be massively expensive and untenable because of the loan prices. There was a shutoff for a while and that trickled down to where we didn't even see any loan issuance. There was an unfortunate cycle where there were no new loans, only CLOs, and you need CLOs to buy loans, and the warehouses stopped. The market slowed a little-it wasn't a credit crisis but everyone was trying to make sure they had their house in order. This was especially around the end of the quarter in March, when there were valuations and redemptions."

CLO Controversy

- "I would consider the CLO market healthy."
- "The structure of CLOs is deeply different than the CDOs that blew up in 2008. CLOs don't have the poisoned assets that CDOs had. No AAA CLO has ever defaulted."
- "[To figure out the worst-case scenario] we run stress scenarios where if a AAA CLO would take a principal loss, it would take sustained 30% defaults year over year for the rest of its life. That's a big number. For a serious crisis, it would take multiple years of something like 15% defaults. 15% sustained defaults could be an issue. It could shut down and hinder replenishment of the loan market."
- "That would be pretty bad. 15% defaults per year for two or three years to the leveraged loan market would create a tough time for the economy. It would be a recession like in 2008 because it would be sustained for so long. In 2008 default rates spiked, but only for a couple of months. I don't know if any kind of stimulus could help us through that."
- "The worst-case scenarios that we are looking at is that we have a serious resurgence of the coronavirus with continued lockdowns across the states and a continued price war in oil and gas. We could see another scenario

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CLO trader for a global bank

were loans drop another 15 points again. There is a lot of velocity in the market right now and things move quickly but some of the unknowns from March are better known now. I don't think there's a big crisis looming. Nothing is making me raise my eyebrows."



CLO Market Outlook

- "In the short term, the outlook might be mildly negative because of the increase in COVID cases in the U.S., which is primarily where the credit exposure of CLOs is. They're still historically wide. Things have been tighter but we're still in a period where people are worried about the crisis. It's also state-dependent."
- "I think if the COVID crisis ends in eight months, it can normalize back to mid-2019 levels."
- "I would say the outlook is mildly negative in the short term and then becomes neutral in the long term."
- "The outlook for rates is that they will remain low. With the Fed keeping rates low, CLOs will actually be more attractive compared to other things. The Fed is on track to keeping them low through 2021."
- "S&P raised their [default rate] estimates to 12.5% for one year and the others are around 10%. I don't see them as being very high. I'd be more bullish and say they will be in the high single digits."
- "The industries at risk are primarily oil and gas, housing, gaming, lodging, and retail. We are paying a lot of attention to retail now. Consumer durables matter less but we still care about them. They're getting hit with people not out and spending cash. Then there are marginal ones like transportation and auto."
- "The investors getting into this know what they're getting into. They're hedge funds and managers. The way the product is designed, the people who have the lowest tranches, the equities, the BB and BBB, are going to take all the pain. Some managers who bought or retained equity in their own deals will probably get hurt a little bit. We've already seen some manager acquisitions. The ones who got hurt are the ones coming out of their reinvestment period and who are no longer able to take away some of the pain by now buying cheap loans to replenish. People who have mezzanine tranches in Bs and BBs of 2014 vintage are really getting hurt and with that exposure they can't fix their pools. Generally, it will be hedge funds and credit strategy people but not insurance people. Those play higher up."
- "Banks will be fine. The nature of the product is very liquid. It's not like other trading desks where at the end of the day you're flat and have no exposure; we constantly remain long in the market. It's because it's so liquid and it's the same for all other structured products as well. There are so few purchases relative to others that you have to be long at all times."
- "The risk treatment for CLOs is heavy. It's one of the highest risk weighted assets for a bank. The risk rates are higher than for ABS [asset-backed security] bonds, for example. There are regulations that require an amount of capital to be held against these."
- "The Fed programs are giving the market some help but it will be dependent on the path of COVID. There's a lot of exposure to U.S. credits and as the U.S. economy slows down [with the second wave], the velocity of money decreases and people will have less cash. If this continues it's likely there'll be more stress."

2) Risk manager at a regional bank

The threat of a CLO meltdown has been exaggerated. These instruments make up only a tiny portion of bank portfolios. Critics are keeping a watchful eye on Wall Street instruments that will trigger a meltdown. However, compared to the instruments popular on Wall Street before the crisis of 2008, CLOs are safe and transparent.

- "I was on a trading desk in 2008 when mortgage-backed securities were melting down. Banks are not nearly as exposed as they were with mortgage-backed securities. CLOs are structured differently. For one thing, in the 2008 crisis, there were all types of esoteric and complex securities. They had CDOs squared. One CDO was used as collateral for another CDO. They weren't transparent securities, and people who were buying them didn't know what they were buying. You don't have anything like that in the CLO world. CLOs are relatively simple. It's just a pool of corporate loans. They're relatively transparent. You can see the loans that are in the CLO."
- "It's hard for a CLO to go bust unless every industry in the U.S. goes bust. CLOs are very diversified. In this pandemic you have some industries that are doing pretty well. Walmart [Inc./WMT] and Amazon[.com Inc./AMZN] are doing very well in the pandemic."
- "Banks are buying the AAA-rated loans. You're really protected. You're going to get your cash. Hedge funds in particular are buying the lower-rated loans. I don't think the federal government is going to care if a hedge fund goes out of business. None of the big banks are really going overboard with all this stuff"



- "The CLOs are very diversified so, unless every industry goes broke, the CLOs will be fine. They haven't created CLOs focused on specific industries. I'm kind of surprised that Wall Street hasn't done it, because there's probably a demand for it, but even they learned their lesson from 2008."
- "Rates are so low and CLOs give you a little extra interest coupon. The CLO market is more liquid than the mortgagebacked securities of 2008."

CLO Controversy

- "People are thinking of subprime and all that stuff that happened in 2008—and it's not even close. What happened in March was that the market lost a lot of liquidity. But now that things have calmed down, people see that not all companies are going to fail."
- "Somebody wrote an article in The Atlantic that blew it way out of proportion. They were comparing it to the 2008 crisis. It's not even close. People were trading synthetic CDOs-make-believe CDOs. When the real CDO plunged in price, the synthetic CDO plunged in price, too. In the CLO market, there are no make-believe CLOs. There are no derivative CLOs. There are no complex instruments. If I had to rate it on a scale of 1 to 10, I'd say it's like a 2. Bankers aren't really worried about CLOs. Even if they all went bad, the banks would be fine, because it only makes up 1% or 2% of our assets. There are few banks that probably have a little too much exposure to CLOs, but it's only a
- "A few years ago, there was a lot of chatter that student loans were going to be the next big crisis, but that never happened. It's like Chicken Little. CDO sounds kind of like CLO-just change one letter. But it's not even close. It's a much smaller market. There's just a lot of differences."

- "If we had CLOs squared, I'd be concerned, If we had synthetic CLOs, I'd be concerned. If we had trillions of dollars in CLOs, instead of billions, I'd be concerned. We're already in a recession now and the CLO market hasn't
- "Even the cruise companies are not going under. They were doing so well that they had a lot of cash. And some of the retailers that had to file for bankruptcy were already teetering. The pandemic just cut them the rest of
- "The retailers are taking it on the chin—and the hospitality companies. But the federal government isn't going to let Delta Airlines [Inc./DAL] collapse. In that last crisis they let Lehman Brothers collapse and they really learned their lesson after that."
- "Banks only own a tiny sliver of CLOs. They just don't dabble that much in them. Pension funds and insurance companies and hedge funds are the

buyers. There are also international players involved. In the mortgage crisis, you had a lot of the underlying mortgages going bad. The entire mortgage market crashed. In the CLO world, there's only been a few big bankruptcies. It's not like every company is going bankrupt because of the pandemic. If that were to happen, then all bets are off. But we just had stress tests and the banks are very strong."

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Risk manager at a regional bank

3) Fixed-income portfolio manager for a major bank that invests in CLOs

The CLO and leveraged loan market do not represent a threat to the financial system. The CLO market is not huge and about 65% of CLOs are rated triple-A, with 10% rated double-A. Those CLOs are safe. The real problem is non-investmentgrade CLOs. Those will see some turbulence. The default rate could hit 9% to 12% among non-investment-grade CLOs but the chance for a major selloff in the CLO market stands at only 10% to 15%. Some of the market's performance is dependent on the coronavirus. If it goes away quickly, sparking a V-shaped economic recovery, the CLO market is fine. Otherwise, there will be some problems.

- "The worst thing happening is covenants on loans are being loosened. Maybe this market will shock people back to better underwriting standards. They weakened over the last five years."
- "I think defaults will go up dramatically, maybe to a 9% to 12% rate, but maybe it will be only single-B and double-B loans."



- "About 65% of CLOs are rated triple-A and 10% is double-A, according to a Guggenheim [Partners LLC] investment report. Triple-A and double-A are safe, though they may be a little volatile. Single-A is OK if you have a good manager. It's dicer when you go down the ratings spectrum."
- "Maybe triple-B and single-A loans will get downgraded, but hopefully defaults don't go way up for them."

CLO Controversy

- "If the coronavirus stops, and we get a V-shaped economic recovery, we're fine. But if the pandemic lasts for a long time, companies are going to default. Buyers will be reluctant; collateral will be worth less."
- "In terms of impact on the financial system, the CLO market is pretty isolated. It doesn't affect the whole economy. Companies have levered up before."
- "This is a smaller market than subprime mortgages, and it's not similar to a situation where you had people buying four houses they couldn't afford. With leveraged loans it's generally businesses where the underwriters think they have value."
- "I see just a 10% to 15% chance of a major selloff in the CLO market."

CLO Market Outlook

- "There are some zombie companies. COVID has crushed them and they won't come back. Hotels, travel, restaurants, and retail are suffering, and they can have knock-on effects on other businesses."
- "Investors are taking hits on CLOs. They're getting out at lower prices. Everyone loved CLOs 18 months ago, because they had floating rates. But then rates went down. So you have increased risk of default and lower rates. That led to a lot of selling and people took losses, even on triple-A CLOs."

In terms of impact on the financial system. CLO the market is pretty isolated. It doesn't whole economy. Companies have levered up before.

Fixed-income portfolio manager for a major bank that invests in CLOs

- "If you're holding triple-A you're fine, probably double-A and single-A, too, Double-B and equity CLOs probably get hit for sure. If investors are in with good managers like Carlyle and Oaktree, they can probably get involved in corporate reorganizations."
- "Triple-A CLOs are mostly held by banks and money managers, according to Guggenheim. Double-A, single-A, and triple-B CLOs are mostly held by insurance companies, money managers, and banks."
- "And double-B and equity CLOs are mostly held by hedge funds, business development companies, publicly traded vehicles, and locked-up risk retention funds. They're the most at risk. Banks are probably safe."
- "As for the Fed, its rates are so low that if any company is decent, it can get a loan. The rate won't kill them; they can stay afloat."

2) Investors Holding CLOs

All five CLO investors agree that CLOs are not a threat to the financial system or big banks holding AAA-rated tranches. One source referred to the AAA CLO tranche as "bulletproof" and another said they have performed well through many down cycles. All five sources also agree that the CLO market has issues and downgrades and defaults, especially in the lower tranches, are expected to increase due to COVID-19-induced economic instability. One said the CLO market is in a bit of a crisis and was before COVID-19 shutdowns, with some prominent CLOs suffering major losses. Sources pegged the default threat at between 3% to 15% by year's end. Hedge funds, investment funds, and investors holding the lower tranches will experience losses over the next six to 24 months. Industries facing challenges both before COVID-19 and now include oil and gas, metals and mining, retail, travel and leisure, and commercial real estate. The Fed is not looking to get directly involved in the CLO market but it has clearly signaled it is supporting the investment-grade credit market and providing liquidity, which has helped the CLO market. One source referred to the Fed's involvement as 'stacking money in the lobby of banks so the market knows it's there.' Sources do not expect an economic turnaround until there is a COVID-19 vaccine.

Key Silo Findings

- 1 said the market is in a "little bit of a crisis" and downgrades and defaults are increasing.
- 1 said the CLO market is healing after a downturn in March and April. Defaults are manageable at 3% to 4% and they are likely to increase. New issues are down from last year, more conservative, and for a shorter duration.



- 1 said the economy is under stress so there will be a rise in defaults and downgrades. CLO prices do not reflect the pending downgrades and defaults.
- 1 said some CLO tranches are risky and will take some losses, but most will survive through 2020/2021 despite downgrades and defaults.
- 1 said COVID-19 has led to the downgrade of some CLOs, but protections are in place.

CLO Controversy

- 5 do not see CLO as posing a systemic risk to the financial system.
 - 1 said 60% to 70% of the CLO market is cushioned under triple-A ratings.
 - 1 said CLOs are a robust asset and banks hold a small amount.
 - 1 said it is a tale of two markets. High-quality deals will hold up and lower tranches will experience 10% to 15% failure.
 - 1 said the lower CLO tranches pose a challenge, but a healthy CLO market plays an important role in the provision of corporate credit.
 - 1 said CLOs have performed through many cycles when there were elevated credit risks and defaults and that will continue.

CLO Market Outlook

- 5 expect increased defaults and downgrades of CLOs.
 - 1 said default rates will be 10% to 15% by year's end and downgrades will increase.
 - 1 expects defaults to increase 5% to 10% and investors to suffer losses.
 - 1 said defaults and downgrades will increase.
 - 1 said corporate credit will struggle in 2020/2021, but banks holding CLOs should be fine.
 - 1 said defaults will increase in the next 6 to 24 months.

1) Senior executive with global alternative asset manager

CLOs do not represent a threat to the financial system. AAA, AA, A, and other rated debts that are held by banks and insurance companies are protected by rules that require that dividends paid out to equity holders be withheld in order to replenish and build up the asset base and cover losses that might be unexpected. CLOs have withstood several financial crises in the past because of these rules. Still, because of the COVID-19 situation, there will be increased defaults in some industries like retail, hotels, entertainment, and leisure, and this will hurt those liabilities which are most often held by hedge funds, investment firms, and private equity. They will bear the most risk due to increased defaults on the asset side. However, the exposure to these types of industries is limited to between 10% and 15% of the collateral, while most of the investment does not have an elevated risk. The Fed has played an indirect role by signaling it is there to support investment-grade credit markets and provide liquidity. This has given comfort to the entire credit market, including CLOs.

CLO Market Conditions

- "CLOs are investments in a pool of high-yield loans that have ratings. With COVID, rating agencies have downgraded some of the companies with increased risk due to risk of loss of revenue or other financial stress. When those loans get downgraded, CLOs have rules to protect the debt holders. The AAA debts held by the banks are the ones of concern to the financial system. The debt held by insurance companies is also of concern to the financial system."
- "The rules that protect those interests is that the dividend that gets paid out to the equity holders and most of the fees to the CLO managers get held back. They are instead used to replenish and build up the asset base in case there are more losses than expected. Because of COVID and the increased risk in the pools, CLOs are doing what they are supposed to do and saving money. Instead of paying it out to equity holders and the CLO structure, they are putting it back to be protective of the debt investors. The equity money will come back to them later if all works out. If it doesn't work out, that money is re-allocated for the benefit of everyone else."

CLO Controversy

"I don't think there's any systemic risk to the financial system from CLOs. CLOs have been around for close to 30 years as successors to banks holding loans. A CLO can be compared to a well-structured bank, with a reasonable capital structure and rules concerning their dividend policy. They've performed through many cycles when there were elevated credit risks and defaults. That included the dot com bubble in the early 2000s, the great financial crisis in 2008, and even snap volatility in the oil markets in 2014 and 2015. CLOs survived all of those."



- "Every time is different, of course, but there is nothing in their structure that will make CLOs a systemic risk to the financial system this time around. Nothing has changed in their structure that would make that happen."
- "I don't see a crisis due to CLOs. The only way there could be a crisis is if the underlying leveraged loan market goes away and blows up-if every loan in the universe goes away. That would mean thousands of companies defaulting and millions of jobs being removed from the economy. I just don't see that whole segment of the market going

CLO Market Outlook

- "I think there will be increased defaults in the next six to 24 months and there will be stress on junior bonds and on CLO equity. But that is something that's expected. It's the way the structure in a CLO works, to bear the risk when there is increased stress."
- "On the asset side, there could be elevated risk of default in retail, leisure, hotels, entertainment, amusement parks, and casinos. These are sectors that need large numbers of people. The overall exposure to those is limited to between 10% and 15% of the collateral. Most of the investments held in CLOs do not have an elevated risk of
- "Specifically, the companies at risk are the fitness operators, movie theaters like AMC [Entertainment Holdings Inc./AMC], who are still trying to manage the situation. Many of the defaults are companies that were already stretched and COVID pushed them over the edge. GNC [Holdings Inc./GNC] also defaulted. They were already in trouble before COVID and, with their retail locations closed, it was too much stress."
- "Although there is no risk to the financial system, there is risk to people who bought CLOs."
- "The liabilities of CLOs start with the AAA ratings held by the banks. That's where the systemic risk would come in, but I think there is no risk there. The AAs and As and other rated debt is held largely by insurance companies. I think

they are safe too, so there is no systemic risk there either. The most junior pieces of the CLO liability are held by hedge funds, by investment firms, and private equity. They are the ones that will bear the most risk if there are increased defaults on the asset side."

- "How the asset pool performs determines how the CLO liabilities perform. In almost any scenario, even if they underperform, the CLO liabilities are fine for the banks and the insurance positions. The equity part, however, which is predominantly held by hedge funds and by private equity shops, bears the risk of an increase in defaults."
- "The Fed has an indirect role with CLOs. They support investment-grade credit markets, not CLOs. With this support they have signaled that they are there for support and to provide liquidity. It's only a very small segment of CLOs that they are considering buying-only AAAs, brand new deals, unmanaged deals and those are very few. CLOs hold a very narrow place in their activity but they've done more by directly buying investment-grade corporate bonds. By supporting that part of the credit market, it gives comfort to all parts of the credit market, including CLOs."

I think there will be increased defaults in the next six to 24 months and there will be stress on junior bonds and on CLO equity. But that is something that's expected. It's the way the structure in a CLO works, to bear the risk when there is increased stress.

Senior executive with global alternative asset manager

2) Head of an investment manager focused on distressed debt

CLOs are not a systemic issue. Major banks hold mostly triple-A tranches and those are bulletproof. Banks are not immune from problems but they are insulated. The CLO market is already in a bit of a crisis. Some prominent CLO investors have suffered major losses. Defaults may reach 10% to 11% by year end, but most leveraged loans do not mature in the next couple years, which should limit defaults. But defaults are not the problem-downgrades are. They mean that banks have to hold more capital against their loan positions. Downgrades are greater than expected and will get worse.

CLO Market Conditions

"Downgrades are a big theme now. There have been highly leveraged deals—the highest leverage deals since the inception of the market. A lot of earnings have been adjusted, so the leverage is actually greater than what's published.

- "The market already is in a little bit of a crisis. Some prominent CLO investors have taken big losses, including hedge fund managers Prophet Capital and Hildene Capital and an Eagle Point closed-end fund."
- "It's hard to have a functioning CLO market now. The new issue market is lightening up. New deals have spreads that are 40% to 50% wider than
- "There's a light calendar for maturities this year through 2022. But then it's big in 2023/24. The market might hang in until then."
- "Leveraged loans were more highly rated on average prior to the 2008 financial crisis than coming into the new recession. Downgrades will create stress people didn't anticipate, though they should have."
- "Second-quarter corporate earnings are expected to be a disaster. There's an anticipation of downgrades and downward pressure on the CLO market after the earnings come out."
- "What people are afraid of is that, as leveraged debt matures, companies can't refinance and defaults start to pick up. The [2008] financial crisis was resolved by stabilizing banks. But this time I expect a long recession, and if that's the case it means a lot of stress for CLOs."

A lot of the CLO market is cushioned under triple-A, which accounts for 65% to 70% of the loans. That compares to 90% for subprime mortgage loans in the financial crisis. The twothirds that are triple-A are bulletproof. **Even** though they're highly leveraged loans, most of the time they're tied to a financial buyout.

> Head of an investment manager focused on distressed debt

CLO Controversy

- "A lot of the CLO market is cushioned under triple-A, which accounts for 65% to 70% of the loans. That compares to 90% for subprime mortgage loans in the financial crisis. The two-thirds that are triple-A are bulletproof. Even though they're highly leveraged loans, most of the time they're tied to a financial buyout."
- "And it's triple-A that financial institutions are holding. To bring down the financial system triple-A would have to be in
- "Banks also probably own at least \$100 billion of the riskier CLOs. That's significant, but not a systemic challenge. We might find institutions with excess exposure. But I'd be surprised, because regulators are looking at it carefully."

CLO Market Outlook

- "Many loans are covenant-lite now. If they had covenants, there would be more defaults. In any case, this year isn't a big maturity year so, as long as companies have liquidity, they can hang in there."
- "The question is, can companies' earnings pick up enough for them to make their debt payments? If we recover by the end of next year, companies will be in good shape. Otherwise, they may default in two to three years."
- "Ratings agencies expect a 10% to 11% default rate by the end of this year/early next year. The important thing is that companies are more leveraged than during the financial crisis."
- "People get too focused on default rates. It's not defaults that create distress, it's the downgrades. They mean that banks have to hold more capital against their loan positions. Ratings downgrades are more than people anticipated and will get worse."
- "Troubled industries include oil and gas, metals and mining, retail, and travel and leisure. Commercial real estate is getting hit. It's a broad recession affecting almost every industry, except technology."
- "Among CLO investors, hedge funds are the hardest hit, especially ones using leverage. Some reinsurance companies could suffer."
- "Banks are insulated but not immune. They can suffer losses, but they aren't exposed like some stories would have you believe. They're heavily regulated and monitored."
- "You'd have to see a sustained meltdown in the economy and a 50% drop in companies' enterprise values to see major banks and insurance companies take material losses."
- "The Fed could buy leveraged loans so companies don't have to go bankrupt. But that would be crazy, Leveraged corporate credit isn't a systemic issue. Bankruptcy is a healthy thing. It doesn't mean companies go away. That only happens if they have an obsolete business model."
- "I get the Fed defending against systemic collapse. But buying the debt of overleveraged companies to prevent bankruptcies doesn't make sense."



3) Portfolio manager for a debt investment firm

The CLO market does not represent a threat to the financial system and will not turn into a crisis. Major banks hold triple-A tranches of CLOs and those have never lost when held to maturity. Banks also are better capitalized now than they were going into the financial crisis. Downgrades are going up, but those are for the weaker tranches. Volume is decent for new issues and deals are more conservative than before. Default rates will rise, but that will be for the lower tranches. CLO investors who are patient will do well.

CLO Market Conditions

- "The market's going through a period of healing after the downturn in March and April. Downgrades are impacting outstanding CLOs, but default rates are manageable, running at 3% to 4%. Expectations are that number will go
- "But the downgrades have been at the bottom—to triple-C. That's the main issue. Hopefully, the economy will recover, and then there will be upgrades, eliminating triple-C. An economic recovery will happen eventually, but it will be difficult without a coronavirus vaccine."
- "For new issues, volume is decent, though definitely not at last year's levels. Forecasts are for issuance to go up. Deals are more conservative, with more equity cushion at the bottom of the capital stack and a shorter
- "We're also seeing more flexibility for CLO managers to invest in struggling companies."

CLO Controversy

"I don't see a crisis. Banks' CLO holdings are small relative to Tier 1 capital. Banks are at the top of the structure. Triple-A has never produced a loss when held to maturity. I don't think there will be a meaningful downgrade out of triple-A.

Default rates are going higher. There is more pain to be felt. Strategists are calling for rates in the high teens to low 20s, but that may be too high. I think it's more likely to be 5% to 10%.

> Portfolio manager for a debt investment firm

- "Banks are much better capitalized than going into the financial crisis. These are attractive assets for banks to hold."
- "And CLOs aren't CDOs, [which tanked during the financial crisis]. CLOs are first order securitizations. Of course, just because risk isn't systemic doesn't mean you shouldn't talk about it. But I don't think it's systemic."
- "CLOs are a robust asset. There's a reason why the market came back after the financial crisis unlike private label residential mortgage securities. CLOs have proven themselves through multiple downturns."

CLO Market Outlook

- "Default rates are going higher. There is more pain to be felt. Strategists are calling for rates in the high teens to low 20s, but that may be too high. I think it's more likely to be 5% to 10%."
- "Indebted companies are managing liquidity, sometimes getting support from private equity sponsors and sometimes issuing high-yield bonds.
- "The level of defaults needed to impact the top tranches of CLOs is so high that CLOs would be the least of our worries. I'd look for a cave to live in. The defaults that are coming will impact the equity tranches."
- "Industries suffering are the same ones hurt by COVID: energy, travel, leisure, entertainment, retail. But some industries, like retail, already were facing challenges. COVID was just an accelerator."
- "Investors who are patient and take the longer view will do very well with CLOs. If you're a forced seller or don't have patience, you will experience losses. CLOs issued in 2006-07 before the financial crisis are some of the best
- "The patient investors can actually play a bit of offense. Those who have been hurt are speculative investors speculative credit funds and hedge funds. These are sophisticated investors in it for the risk, rather the income sought by banks in triple-A."
- "The Fed can do a lot. They could buy CLO bonds if they wanted. But they don't seem inclined to intervene in the leveraged loan market. The Fed has a complicated relationship with CLOs, expressing concern about the risk."
- "I think the Fed views CLOs as something to take the risk out of the banking system, because the leveraged loans come off the banks' books. So the Fed isn't looking to interfere. Of course, the Fed's massive injection of liquidity has benefited the CLO market. The Fed stacks money in the lobby so the markets know it's there."

4) Chandrajit Chakraborty, chief investment officer of CLO investment firm Pearl Diver Capital

CLOs do not represent a threat to the financial system. There is less leverage in the system than prior to the 2008 financial crisis and more liquidity. Banks have pulled back on their CLO holdings and what they do still hold is triple-A. Banks have made adequate capital provisions. The investor community now holds the risk, not the banks. Downgrades and defaults will rise. The economy continues to struggle and that weighs on borrowers. Some investors with leveraged positions in lower tranches will get hit-10% to 15% of those positions will not recover. Some hedge funds and specialized credit funds are at risk.

CLO Market Conditions

- "The most important thing is the disconnect between fundamentals and technicals. CLOs sold off 30% to 40% in late February/early March. Now they have retraced much of their drop. That's the technicals."
- "But on the fundamental side, the economy is under significant distress. There will inevitably be a rise in defaults and downgrades to triple-C. The entire market isn't pricing in the possibility of a second coronavirus wave."
- "To be sure, this is different from the 2008/09 financial crisis. The system had higher leverage and much less liquidity then. The central bank and Treasury have now intervened aggressively to support markets. They have signaled they will do what's required to help restore confidence."

It's a tale of two markets. We will see a wider dispersion between high-quality deals that will hold up in price and weaker for junior deals classes. Probably 10% to 15% of lowertranche CLOS won't be able to recover. By no means are we out of the woods.

Chandrajit Chakraborty, chief investment officer of CLO investment firm Pearl Diver Capital

"People rushed in to take advantage of the falling CLO prices, raising capital. We did so early on. People continue to buy. But the market isn't appropriately pricing the fundamental risk of equity and triple-C tranches. Prices don't reflect the downgrades and defaults that are coming."

CLO Controversy

- "It's a tale of two markets. We will see a wider dispersion between high-quality deals that will hold up in price and weaker deals for junior classes. Probably 10% to 15% of lower-tranche CLOS won't be able to recover. By no means are we out of the woods."
- "Money chasing the market will go into the upper quartile. Spreads will tighten and returns won't make sense. For investors who have high return targets, they have to take real risk but be careful that they don't invest in the 10% to 15% of CLOs that don't recover."
- "CLOs don't represent a threat to the financial system. As I mentioned, there's less leverage than prior to the 2008 financial crisis. Banks have pulled back on their CLO holdings, though they still hold triple-A. Adequate capital provisions have been made. If you have an unlevered position, there is no risk of loss."
- "All this makes a banking crisis quite remote. The risks have moved from the banks to the investor community."

CLO Market Outlook

- "Defaults will go up. Company balance sheets already were under pressure before the pandemic. Governments and central banks have acted globally to support companies. But that support is debt, which needs to be repaid."
- "That can only happen if people are spending. The big unknown is how confident people will be to spend again after an initial surge. The government aid only helps for a short time."
- "I don't see the economy stabilizing yet. A vaccine is still uncertain. The number of unemployed is huge. Those people won't be spending. Add it all up and it poses a real challenge to CLOs. Downgrades may stabilize, but many companies will default."
- "Investors may take big hits, especially ones buying on leverage. CLOs are designed as cash flow instruments for a buy and hold strategy. They can be traded but they will go through swings. And if you have to sell, you will take hits. Hedge funds, special credit funds, and manager affiliate entities are the most at risk."

5) CEO of a European asset management firm

CLOs do not pose a threat to the financial system. The challenge is to those who own the most junior tranches, which are likely to take losses with the downturn caused by COVID-19. Banks should not be severely impacted because CLOs are structured to withstand significant stress, particularly if they have good managers. The worst-case scenario would be a



combination of a prolonged depression with a loss of confidence in the financial sector, which would then lead to a liquidity squeeze on banks, as seen in the global financial crisis (GFC). As also seen in the past, inappropriate policy responses by the authorities could make the crisis even worse.

CLO Market Conditions

- "It is not CLOs in and of themselves we should be asking about. The essential question is if high-yield leveraged credit is dangerous. Is risky credit going to lead to what happened in the GFC in 2008? The market then was overheated, the underwriting was of low quality, and excessive leverage posed a threat when there was a slowdown. The global pandemic and related shutdowns are arguably a worse threat to high-yield credit than the GFC."
- "Within the CLOs there are tranches that look relatively risky and likely to take losses because of the COVID-19 recession. But I don't think the more senior bonds, BBB and upwards, will go payment-in-kind (PIK) or take principal losses. Given the junior tranches are a small percentage of CLO liabilities, this means that most bonds will survive the stress in 2020/21 even with a lot of restructuring and defaults."

challenges, particularly those people who own the more junior tranches. But by and large we don't see them as posing a systemic risk and affecting the financial system and the health of banks.

product

poses

The

CLO

CEO of a European asset management

CLO Controversy

- "It is understandable that people want to draw a comparison with the subprime mortgage crisis but the reality is it's not really comparable."
- "The CLO product poses challenges, particularly for those people who own the more junior tranches. But by and large we don't see them as posing a systemic risk and affecting the financial system and the health of banks."
- "[The worst-case scenario would be] if we had a prolonged and extended depression like in the 1930s-and that could come about because of successive waves of pandemics and a loss of confidence in the ability of the financial sector to manage its way through the crisis—that would create the kind of situation we saw during the height of the GFC in 2008 and it would also repeat the market psychology in the 1974 crash."
- "When there's such a loss of confidence, we have the kind of environment we saw during the GFC, where people doubt the banks will survive and that affects lending. The liquidity squeeze causes previously sound corporations and financial institutions to go under. That kind of scenario is still possible even if it's not a central case."
- "That kind of catastrophic loss of confidence and prolonged depression would lead people to look at their balance sheets and not trust the asset values the banks have, which could then as a result become insolvent and fail."
- "Authorities may not have ability nor the willingness to provide the blank checks to the financial sector as before. A renewed bailout by the authorities will likely lead to a political, bureaucratic, and public opinion backlash like we saw during the GFC."
- "Discriminating against CLO products could exacerbate the liquidity squeeze and lead to a wider loss of business confidence. But the reality is a healthy CLO market plays an important role in the provision of corporate credit."
- "We would be worried about asset classes being caught up between fundamental stress and loss of confidence in the financial system, and then inappropriate policy responses to such a crisis."

- "The banking sector's exposure to CLOs is now often in the most senior tranches, which have the lowest risk."
- "Generally, corporate credit will struggle into 2020/2021. If banks are at risk it is because of these loans rather than their holding CLOs."
- "Banks are now better able to meet the stress than [during] the GFC, with much higher levels of capital and better levels of access to liquidity."
- "We also note that the authorities are more proactive in their policy responses. That will lead to a better outcome than we had in 2008. Politicians in the Eurozone often said and did things that made things worse in the 2008 crisis."
- "People have tended to underestimate the strength of CLOs, particularly with good managers, consistently since 2001. I don't think CLOs will fall over like dominos. The good managers will outperform even in stressful times."

3) Industry Specialists

Industry specialists were split on the level of risk CLOs are poising for the financial system; however, all six sources agree that downgrades and defaults are on the rise. Three sources think this does not threaten the overall health of the financial system, as AAA tranches of CLOs are secure and banks generally hold the higher-rated product and have a small overall investment. The other three sources think the downgrades, defaults, and bankruptcies will continue and even accelerate. Driven by the COVID-19 economic shutdowns, tranches are unravelling and losses are expected for hedge funds, small banks, and investors focusing on the CCC and even B tranches. One source said the CLO ratings are currently inflated and as the rating agencies wake up and downgrade further there will be a problem. This source added that a second wave of COVID-19 economic closures will lead to a CLO crisis. The Fed has intervened with support with Paycheck Protection Program (PPP) loans and buying some corporate debt, but it is unlikely it will back hedge funds and asset managers.

Key Silo Findings

CLO Market Conditions

- 1 said 30% of credits have been downgraded. Risk is higher but the CLO market is improving and deals are getting
- 1 said downgrades are increasing and recovery rates are dropping.
- 1 said 25% of all loans held by CLOs have been downgraded and the economy is heading into a debt cycle.
- 1 said there will be higher levels of default of loans held by CLOs because of COVID-19.
- 1 said losses are likely because of COVID-19.
- 1 said CLO market conditions before COVID-19 had increased defaults in energy and retail loans. Since COVID-19 many other sectors are at increased risk.

CLO Controversy

- 3 do not think CLOs pose a significant risk to the financial system.
- 3 said downgrades, defaults, and bankruptcies will continue and even accelerate, putting pressure on the overall economy.

CLO Market Outlook

6 expect additional downgrades and defaults across a broad range of loans within CLO. Investors in the lower tranches will suffer losses.

1) Head of a loan trade organization

The CLO market is not headed for crisis and does not represent a threat to the financial system. Downgrades and defaults are rising, but limited losses will not cause CLOs to liquidate. The market is rock solid at the triple-A level. Major banks' CLO holdings amount to just 1% to 2% of their risk-rated assets. Banks will lose money if CLOs tank, but that is not systemic risk. Losses are an issue for hedge funds and special strategy funds taking big risk for bigger returns.

CLO Market Conditions

- "Conditions are improving; deals are getting done, though at wider spreads than before the COVID crisis. Clearly risk is elevated. I expect a continuation of the rise in defaults. Liquidity is a problem for smaller
- "One issuer announced a \$400 million deal for next week, which is at the smaller end of what they have done in the last six to eight years. The market is tougher, but it's not shut down for new deals."
- "Existing deals are trading at wider spreads, too. We see a diversion of cash flows into safer tranches. It's difficult trading as you go down the debt stack, but investors can get portfolio modeling."
- "Close to 30% of credits have been downgraded. Ratings agencies are aggressive in their downgrades or putting companies on ratings watch. But most CLOs have a maximum triple-C holding of 7.5%. Exceeding that threshold means holdings must be market to market—an immediate hit."

We already have seen some losses and that could become an issue for Bs and double-Bs, but it's doubtful losses will hit single-A and double-A. If there are sporadic economic shutdowns because of COVID, that will cause more defaults.

Head of a loan trade organization



CLO Controversy

- "I don't think it will turn into a crisis. Just because there's a mark to market, that doesn't force CLOs to liquidate. Even if you can't issue new CLOs, so what? It just means less borrowing capacity for low-rated companies. There are other sources of lending for them, including government programs."
- "Can financial markets get worse and affect CLOs? Yes, it's a risk asset. Investors should go in knowing liquidity decreases as you go down the debt stack. But investors who buy equity tranches don't intersect with those in triple-A. Losses will come in lower tranches."
- "The CLO market is no threat to the financial system. It's mostly banks who own the triple-A, which are close to impossible to break. As someone wrote, if they break, we'll be back to eating raw meat in caves."
- "U.S. banks own about \$108 billion of triple-A CLOs at par. That's not a lot. About 85% of the triple-A is held by JP Morgan, Wells Fargo, Citigroup, and [Bank of New York Mellon Group/BK]. CLO holdings amount to 1% to 2% of their risk-rated assets."
- "That's not systemically risky. Banks will lose money if CLOs go bad, but that's absolutely not systemic risk. It's just not big enough."

CLO Market Outlook

- "We already have seen some losses and that could become an issue for Bs and double-Bs, but it's doubtful losses will hit single-A and double-A. If there are sporadic economic shutdowns because of COVID, that will cause more
- "The investors in equity and other risky tranches, who are the ones getting hit, tend to be hedge funds or special strategy funds taking a big risk for bigger returns."
- "Occasionally it's sovereign wealth funds investing in these, and maybe some pension systems that invest in the hedge funds. There are a few closed-end funds for individual investors."
- "As for the Fed, the CARES Act gives broad authority [for assistance]. It has been executed more narrowly. These programs don't really include the leveraged finance market. The Fed's lending could be broadened to these companies."

2) Finance professor at a top university

CLOs are unlikely to pose a threat to the financial system. Impairments will hurt banks, especially if they occur in higherrated tranches. But no major bank is likely to go under because of CLOs. Some smaller banks may suffer big. It is difficult to know whether there will be a crisis in the CLO market. The answer largely depends on how aggressive the Fed acts in providing liquidity. Fed officials may pay close attention to the CLO market, given the problems that arose with structured products during the financial crisis.

CLO Market Conditions

- "People are starting to worry about the performance of leveraged loans. There is a good deal of downgrading. At some point, the loans may bounce back."
- "But, in the short run, a lot of CLOs have features forbidding their managers from making particular trades when safeguards are triggered, until the quality of their holdings improves. That limits what they can buy."
- "I've seen research that recovery rates are dropping. That means a lot more stress for CLOs than assumed."

CLO Controversy

- "I wish I knew the likelihood of a crisis. What makes it so unknowable is you have to be able to forecast policy. Will the Fed step up? The triple-A CLOs are mostly held by banks, insurance companies, pension funds, and mutual funds. It would take a lot for the safe tranches to get affected."
- "If issues do arise, it's something policy makers may pay attention to, given the problems with structured financial products during the financial crisis."
- "It's hard to imagine a threat to the entire banking system. But impairments will hurt banks, especially if triple-A and double-A tranches are affected."
- "It's difficult to know the total exposure for banks, but it's hard to see a major bank failing over this. Some smaller banks could get in trouble."

Investors holding the lowerlevel tranches might get hurtmostly hedge funds. problems could work their way up, though they haven't hit class A or B tranches.

Finance professor at a top university

CLO Market Outlook

- "Given the ratings downgrades for underlying loans, it's hard to see the default rate not picking up. I don't know exactly how much. If movement is restricted because of the coronavirus, it's hard to tell how much money we will throw to keep companies in a good place."
- "We can get through the current crisis, but I wouldn't be surprised if a lot of companies have had a mortal blow."
- "Sectors of distress include energy, restaurants, movie theaters, and other leisure activities. One of the bigger industries in CLOS is healthcare, which might suffer because elective procedures have been postponed during the
- "Investors holding the lower-level tranches might get hurt-mostly hedge funds. The problems could work their way up, though they haven't hit class A or B tranches."
- "The question is how quickly companies can get back on their feet. If highly levered companies do face problems, we could see that a year from now."
- "The Fed is big. When it first said it was buying loans, it created liquidity in a market where there was none. How much will they devote to purchasing loans from CLOs? And the biggest issue is stimulus for companies that have underlying loans."

3) Megan Greene, economist at Harvard Kennedy School

The economic slowdown will reveal fault lines in the CLO market. Corporate bankruptcies are on the increase and 25% of all CLO loans have been downgraded. This will not lead to a systemic crisis; however, some of the lower tranches of CLOs will unravel. The losses are likely to be borne by institutional investors and the fallout could hit banks peripherally, but it should be contained. One reason for concern, however, is that the Fed has limited ability to intervene in a CLO crisis.

CLO Market Conditions

"There's a lot of complacency around this. Investors just assume the Fed has stepped in and shored up the liquidity crisis. But liquidity doesn't do much about the solvency issue. I definitely think we're going to have a debt cycle. We're starting to see more companies filing for bankruptcy. That's the

beginning of it. About a quarter of loans held by CLOs have been

downgraded already."

"On their own, a series of defaults and sell-offs in CLOs won't create a systemic crisis. That being said, this has been a global crisis that has hit every single corner of the market. That will exacerbate any problems."

CLO Controversy

- "The biggest tranche in most CLOs is triple-A rated, so it's pretty safe. That's one argument. The other argument is that you've got risk-averse investors pouring into these investments, and covenants have been massively watered down over the past decade. Covenants end up being a pretty good canary in the coalmine. We don't really know what's on private equity balance sheets. There isn't a whole lot of transparency there."
- "That's impossible to handicap. We are going to see a bunch of further corporate downgrades. I do think we're going to see escalating defaults. We're going to see tranches of the CLO market that unravel."

CLO Market Outlook

- "I have no idea how to handicap that."
- "Retail is at risk. We've all been calling for the death of retail for the past decade. It hasn't happened, but this could be the final nail in the coffin. I don't know how much CLOs have gone into funding airlines or entertainment. It's all the industries you would expect to struggle."
- "It's mostly institutional investors. There's a pretty heavy private equity presence. There are also ETFs [exchange-traded funds] that have invested in CLOs, and that tends to be more retail."
- "[Banks] not immune. They're not holding a lot of these directly, but they are involved. When there is a sell-off, the actual transactions happen

The Fed's in a tough spot. The Fed has been warning on this for a year and a half. Jay Powell gave a speech on leveraged loans. The Fed can support banks. It has a harder time supporting other financial firms directly. Insofar as the Fed has been buying up corporate debt, that has helped. Even though that's not the Fed saying they'll buy up CLOs, that has taken some risk out of the market. That has kept the party going. It's not like the Fed is going to go in and bail out a private equity fund or an asset manager.

Megan Greene, economist at Harvard Kennedy School



- slowly. Banks are expected to step in and provide the bridge. There is a question about whether banks want to do that or would be able to do that. There tends to be an equity mismatch that banks are expected to step in and bridge. Banks could be drawn into it, but only peripherally. Shadow banking does play a pretty big role in finance."
- "The Fed's in a tough spot. The Fed has been warning on this for a year and a half. Jay Powell gave a speech on leveraged loans. The Fed can support banks. It has a harder time supporting other financial firms directly. Insofar as the Fed has been buying up corporate debt, that has helped. Even though that's not the Fed saying they'll buy up CLOs, that has taken some risk out of the market. That has kept the party going. It's not like the Fed is going to go in and bail out a private equity fund or an asset manager."

4) Veteran sales executive for software used by CLO manager

CLOs do not represent a risk to the financial system. CLOs are much more transparent today compared to the derivatives that led to the financial collapse of 2008. Those instruments were complex and investors failed to research what they were investing in. CLOs are appropriate for investors who understand and are willing to accept the risks in them in exchange for the rewards. Banks are not at risk but COVID-19 has created more risk in CLOs because there will probably be more companies going out of business and defaulting on loans. The worst-case scenario is that a lot of businesses will default and not be able to pay back their loans. That does not mean the financial system will crash.

CLO Market Conditions

- "CLOs are a straightforward investment opportunity that are available for certain investors who are looking for that kind of risk/reward."
- "When investors look at a menu of items they can invest in, the CLO option may meet their profile objectives of risk/reward. They're a valid investment opportunity."
- "CLOs carry the normal risks investors are willing to take as long as they assess risks and rewards."
- "Investors each have a risk/reward profile. These profiles are high, low, or medium risk. No risk, no reward. Less risk, less reward. Taken along with the investor's risk profile and the opportunities for where they can invest their money, CLOs are a good option for certain investors. Investors should be as careful, as with anything else. They should see what loans are in the tranches of the CLOs. Obviously, there should also be some level of regulation so they shouldn't be able to defraud a customer."
- "COVID-19 adds a fair amount of risk to a CLO. Investors need to take that into account."
- "COVID-19 is relevant to the extent that COVID-19 negatively affects certain businesses and some more than others. There will potentially be greater levels of default on certain loans inside the CLOs. Investors need to be careful of that."

CLO Controversy

- "There's been a lot of press about how risky CLOs are to the financial system. Compared to the financial crash of 2008, the risks of CLOs today are a drop in the bucket."
- "The current CLOs are very transparent. It's the loans inside the CLOs that are the risk, but firms that buy them should not have a hard time assessing the risk and deciding whether they're a good or bad investment."
- "The derivatives stacked up on top of each other in 2008 were much more complex than the CLOs today. It was byzantine. It was hard to figure out the exact risk and there was a cascade effect when anything fell."
- "The derivatives that took down the market in 2008 were just crazy. They had derivatives on derivatives. It's like selling insurance policies on my house to 20 different people. If my house went down, only one person was going to get paid off and the rest were going to lose their shirt."
- "You can't compare CLOs to that. It was much more complex than today. In 2008 there was a lot of nontransparency. Funds like pension funds had not very savvy investment professionals working for them and they got the wool pulled over their eyes. They didn't put much research into the things they were investing in. In a way, those investors deserved to lose their shirts because they just trusted the banks too much."
- "The risk inherent to CLOs is less than the instruments that brought on the 2008 financial crisis. The leverage used with CLOs is much less than what was in place with CDOs and [mortgage-backed securities]. Also, the loans in a CLO are made to diversified businesses, rather than all to homeowners as in residential mortgage-backed securities."
- "There is always risk that the borrowers will not be able to pay back the lenders. However, before investing in a CLO tranche, there should be a very straightforward financial analysis. That way the risks are very straightforward."



"The worst-case scenario is that a lot of businesses go bankrupt and can't pay back their loans. That will negatively affect the performance of CLO investments. However, the financial industry is not going to crash if a few companies go out of business and can't pay back their loans and those CLOs have less returns than they were expected to have."

CLO Market Outlook

- "For example, companies that own restaurants may have a higher risk than companies that can continue to do their jobs at home. If I had a lot of restaurant loans inside my CLOs, I'd want to be aware of that. I would take that risk into account."
- "The investors that could get hurt are the ones who don't understand the risks in the CLOs. In 2008, one of the big problems was that investors invested in things they didn't understand, so they lost their shirt. As long as an investor understands how a CLO is designed and constructed, and how it makes returns, you can take your risks appropriately."
- "For example, if you're in a CLO now, you'd want to be monitoring it constantly and ensure that you adjust your positions as necessary."
- "I don't think it's a major risk for banks. I think banks have a very strong capital position since the crash of 2008. Banks are in good financial condition. I don't think the risks are there for banks like in 2008. Also, CLOs are put together with loans not made by banks."

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Veteran sales executive for software used by CLO manager

5) Executive with a fintech platform

People who invest in CLOs are professionals who know the risk, unlike people who invested in the CDOs that led to the 2008 financial crisis. Excessive risk taking could, however, be dangerous, but since the Fed has stepped in to help out even with junk loans, it has reduced the risk to the financial system. Otherwise, hedge funds and opportunistic credit funds would be most at risk because they buy the lowest, riskiest tranches. The consumer space and travel industry are the most at risk for defaults. A worst-case scenario could result in a credit freeze like in 2008. This could happen if the Fed stepped out. COVID-19 is definitely impacting some of the underlying loans in CLOs.

- "There is a lot happening in this sector currently. The technology itself is fine but when there are excesses and things go wrong, CLOs can become dangerous to the financial system."
- "In times of crisis, companies may go bankrupt as, for example, Hertz [Global Holdings Inc./HTZ] did. Hertz was probably in many of the CLOs."
- "That's still fine because of the way CLOs are structured. The most senior tranches shouldn't be affected. The equity of the lower tranches are impacted but they got paid for the risk. That's the risk/return. In order to get paid more, you have to take more risk. In times of crisis, you can get wiped out, but also get paid well to take those risks. That's why it works."
- "The junior tranches are typically bought by hedge funds that get paid very well for holding those risks. The seniormost tranches are held by banks or insurance companies and they should not be affected by a crisis."
- "During the financial crisis people were incentivized to take a good idea to extremes and then it fell apart. It became a negative."
- "With CLOs, the underlying assets are leveraged loans, the riskiest of the riskiest loans. They're junk loans. They're typically made to companies coming out of a private equity situation, where a company has been highly levered. If anything goes wrong, the company goes bankrupt. The private equity company will still make a lot of money. CLOs are a machine to absorb the loans. Banks arrange the loans and get a lot of money for that. It's an incentive in order to fill the CLOs to originate more of these loans."
- "There may be losses because some of the underlying loans are affected by COVID."



CLO Controversy

- "As with everything, there are risks. Some of the portfolios were created because there was demand for CLOs. The CLOs are affected by supply and demand. Bankers had an incentive to issue more loan volume and create more
- "CLOs are a good idea but it becomes risky if the purpose is to just generate fee income. Excess can become dangerous."
- "CLOs provide liquidity for the leveraged loan market. They are a complex product but the people who invest in them are professional investors and they are aware of the risks. They don't just rely on ratings like they used to during the financial crisis."
- "The worst-case scenario could be a similar situation to what we had in 2008. There would be a freeze, where no investors want to invest in these things."
- "The risk/reward in CLOs is very bad. There's a lot of risk involved. The loans are for highly leveraged companies and often times they come with no covenants. It's a fragile construct. The worst-case is the appetite of investors could dry up."
- "You can only issue a CLO if you have investors for each of the tranches. The AAA tranche is the hardest to find investors for. They were typically sold to Japanese banks. If there are no triple-A buyers, it's going to be very problematic to place CLOs. There's less risk appetite. There is no demand for CLOs. That means a big chunk of the leveraged loan market cannot be placed [because there's no investor for it] and you cannot issue loans and, therefore, the availability of credit is stopped."
- "If the Fed steps out it could be another financial crisis with no credit availability for corporations. A lot depends on how the COVID crisis plays out. The market has been very optimistic with a V-shaped recovery but now we're starting to see that the underlying economics are still very bad."
- "The COVID crisis will take a while. Central banks can support this for a bit but if it's creating big deficits."
- "If there's no demand for AAA tranches, it can all collapse on itself. Banks are hungry and they underwrite deals but maybe they cannot place the CLOs. Banks get alarmed and have to reprice them."
- "A lot of corporations depend on the availability of credit to finance their operations. As in 2008, if everyone stops making loans, companies will default more and more. It's a collapse and a credit crisis."
- "There could be an increase in defaults and it will affect banks' balance sheets and, ultimately, everyone-and also the job market."
- "It will affect industries that are financed mainly by debt. However, consumer goods and some other companies are very highly levered and that's where we would see problems."

- "A lot of people were shying away [before COVID] from problematic industries such as oil and gas. A lot of them have been overleveraged for a long time. People didn't want exposure to them in CLOs or, if there was exposure, they had to get paid a premium."
- "Now we have a macro crisis [with COVID] and a lot of sectors are affected. The consumer space and travel industry are affected, for example. There are many industries affected by COVID that won't be able to pay the loans they took out. That means that defaults are going to rise."
- "Moody's and S&P are monitoring how high defaults will go. As defaults go up, you can see the effects on the different tranches in the portfolios. When it jumps from BBB to BB, that's the big drop-off, going from investment grade to non-investment grade."
- "Normally, CLO tranches are liquid so you can trade them. However, when there are downgrades during times of crisis [like COVID] and stress, some of them may become illiquid so you cannot trade out of your positions."
- "Some of the investors may have to sell because of their investment guidelines, if something becomes junk status. There's enormous pressure on the lower-rated tranches for people to trade out of them. There can be rating or performance triggers if they reach certain thresholds."
- "The lower-rated tranches are typically bought by hedge funds and opportunistic credit funds. They provide diversification. Like for like, if you invest in a CLO tranche, you have a pickup vs. a single bond of the same rating. That's why managers consider CLOs over buying bonds."
- "The problem can be where the funds raise their money from. That's where the pain might happen. Typically, it's from pension funds, endowments, family offices, and from the general public that likes the promise of high returns, but which comes with high risks. Ultimately, those are the people who might see losses in their portfolios."



- "The difference this time compared to when we had the credit crisis is that the Fed has stepped in and is essentially buying corporate loans. That means there's a buyer. The junk market has actually rallied. However, if this is a longer crisis, defaults could go up and they would trade far from par."
- "There's been a rally since March and April because of the Fed stepping in and being willing to buy up the loans. That's a problem. There's a lot of cheap money buying up the CLOs. The market is dislocated from the fundamentals because of the Fed stepping in."
- "Some of the companies in CLOs should be out of business because their business model is bad. There's also a lot of private equity in there, like Blackstone [Group Inc./BX]. They loaded up companies with debt to finance the buy-out and now, because of the COVID crisis, they're running into problems. And the Fed is bailing them out. Ultimately, it's the private equity firms who are going to get rich. The Fed is paying for the excess of debt."
- "I would understand that the Fed would bail out investment-grade debt but for junk grade debt it's a little strange that we are bailing out companies that should not be bailed out. The private equity owner leveraged them up with debt. It's very questionable."

Currently there's no problem but it's because of the Fed. If the Fed had not stepped in, we would be seeing a big debt crisis.

Executive with a fintech platform

- "Basically, a CFO that has financed a company conservatively is now getting punished. Their competitor who spent excessively like there was no tomorrow is getting rewarded for their irresponsible and even unethical behavior.
- "Currently there's no problem but it's because of the Fed. If the Fed had not stepped in, we would be seeing a big debt crisis."

6) Mayra Rodriguez Vallardes, bank and capital markets risk consultant

Grade inflation by rating agencies has lulled CLO investors into a false sense of security. Currently, CLOs are not going to destabilize the financial system but loan defaults in the energy, retail, healthcare, and hospitality sectors are increasing and have this source concerned about the CLO market. If the economy continues to steadily recover CLOs will still be stressed but there will not be a crisis. If rating agencies react to the COVID-19 economic shutdowns and/or there is another wave of shutdowns, downgrades will be plentiful and the CLO market will be in trouble. The Fed is being asked to step in everywhere and is helping to prop up the current situation, but its balance sheet is bloated. Banks are not immune from the situation, but they are facing this situation with more capital and liquidity that 2008.

CLO Market Conditions

- "If you're talking about market liquidity, there is some trading that is very minimal. People are very concerned about credit conditions. Issuance has dropped. Importantly, if you mean credit markets, I am very, very concerned. Even before COVID, there was a rise in defaults in the energy sector, the retail sector. Not only has there been a significant rise in default probabilities in energy and retail, you're now seeing it in healthcare and hospitality. All these loans, which are loans that we should all be worried about, are in tons and tons of CLOs, I'm even more concerned about the CLO market than I was last year."
- "The Office of the Comptroller of the Currency [OCC] made it very clear that the leveraged lending guidance that was put together by the Fed, the FDIC, and OCC would not be used in enforcement. That was basically a green light to lenders, saying go ahead and do these, and you won't be punished. How do I put it diplomatically? When you're told as a banker, we don't use this guidance, it's a signal to go ahead and underwrite more. There was just this massive increase in CLOs, many of them covenant-lite and document light."

CLO Controversy

"It all depends on what the rating agencies do. I am very surprised they haven't been downgrading more of these different tranches. We've had a forced stoppage of the economy. We're already in trouble. How is it possible that you have stoppages in 50 states but we haven't had a massive cascade of downgrades? Back in 2005 and 2006 we had ratings inflations of mortgage-backed securities. Now, do we have ratings inflations of CLOs? The reality is a lot of these CLOs should have been downgraded."

CLO Market Outlook

"When market participants panic, market participants will sell. Insurance companies, pension funds, and banks are the real movers and shakers in these markets. When they see a cascade of downgrades, many of them are ordered



to sell things that are in the lower tranches. The danger is, will they also have to sell the BBB tranches and the A tranches? At the moment, do I think CLOs are going to destabilize the financial system? No. But the reality is that as rating agencies wake up and begin to downgrade, there is going to be a problem. We have these interconnections that are not obvious between banks and non-banks. There's a lot of opacity."

- "If we continue to reopen and we're not seeing a lot of new cases, then sectors of the economy are going to come back. The CLO market will stumble around and have some hiccups but there won't be a crisis. If we have a continued rise of COVID cases or we get into a second wave, that's going to propel us into a CLO crisis. We really do have inflated ratings. The other problem is we're at an even lower interest-rate environment. There's more pressure for pension funds and sovereign wealth funds and all these players to chase yield. To quote Greenspan, 'there's this exuberance.'"
- "Default rates definitely will be much higher. They will be much higher than in 2009. There's always a lag in bankruptcies and defaults after a recession. You already have a 17% default rate, give or take, in energy, and 19% in retail. Let's not forget, right now there's a propping up with all these programs. You've got PPP. Eventually, all of these things are going to end. The last recession was a manmade crisis. This is a health crisis that's global."
- "Retail by far is at the very top, then energy, then healthcare and hospitality. Hospitality is going to rise, because people can't travel, so you don't need hotels, you don't casinos, you don't need restaurants." [She cited Fitch's published list of companies most at risk of default. In retail, companies projected to default this year are Men's Wearhouse (Tailored Brands, Inc./TLRD), Belk Inc., Ascena Retail Group Inc. (ASNA), Renfro Corp., Isagenix International LLC, and Serta Simmons Bedding LLC].

It all depends on what the rating agencies do. I am very surprised they haven't been downgrading more of these different tranches. We've had a forced stoppage economy. We're already trouble. How is it possible that you have stoppages in states but we haven't had a massive cascade downgrades? Back in 2005 and 2006 we had ratings inflations of mortgage-backed securities. Now, do we have ratings inflations of CLOs? The reality is a lot of these CLOs should have been downgraded.

Mayra Rodriguez Vallardes, bank and capital markets risk consultant

- "Immune, no. But, at the moment, precisely because of Dodd-Frank and Basel III, the banks went into this with far higher levels of capital and liquidity. The banks are in better condition. However, if we continue to have all these defaults, which is going to lead to more unemployment, what that means is when PPP and all these other programs end, we're going to see defaults. Individuals who lost their jobs may never get their jobs back. If individuals can't pay their mortgages, then you're going to see some stresses in other parts of the economy."
- "I'm worried. The Fed is being asked to step in everywhere, because our legislators didn't do their jobs. The Fed, yet again, even more so than in the 2007/08 crisis, is the sole entity that has been asked to step in. I really worry about this. The Fed has a bloated balance sheet, more than ever. It also creates moral hazard-this idea that I can be indebted, I can misbehave, and Daddy Fed or Mommy Washington is going to rescue me. That's a problem."

Secondary Sources

These three secondary sources focused on the looming problems CLOs are facing, the potential loses lower-tranche CLO investors face, and how the shakeout has brought a potential CLO issuer back into the market.

July 3 Twin Cities Pioneer Press article

CLOs are identified by this article as looming economic peril.

- "Corporations, particularly in the United States, are piling up debt. This will cause problems of biblical proportions sooner or later, but this is largely ignored by the public. Regulatory agencies that should act look the other way or reassure themselves that everything will be fine, just as during the run-up to the financial debacle that unfolded in the summer of 2007. This is dangerous for us all."
- "Right now, the danger lies in CLOs or 'collateralized loan obligations.' These are very similar to the collateralized mortgage obligations, issued in increasingly complex variations, that blew up our economies 12 years ago. They have



more than quadrupled over the past decade to over \$1 trillion in nominal value, an increase that parallels the growth of CMOs two decades ago."

- "The loans in CLOs are loans to corporations. Yet they are not traditional bank business loans nor corporate bonds as have been issued for centuries. Like CMOs, they are supposed to compartmentalize risk and thus reduce it. But instead they will amplify dangers, just as in the opening years of this century. The fact that the basic Federal Reserve internet page on CLOs repeatedly references 'Cayman Islands' should raise red flags for everyone."
- "The problem is that collateralized obligations take loans, whether to corporations or home buyers, and package them into bonds. But these bonds are 'structured' by degree of risk. For a particular package of loans, one set of risky bonds must absorb all of the first defaults that may occur. These bonds pay a higher rate of interest. Only when accumulated losses exceed the value of this first 'tranche' of bonds, do buyers of the next, somewhat less risky set, lose anything."
- "Buyers of the low-risk tranches thus theoretically face little danger. Those clinging to makeshift rafts and hatch covers may be washed away when a financial storm overwhelms the ship, but owners of the high-class tiers of any package of loans will be safe in the best of lifeboats, regardless of who perishes."
- "Remember former Fed Chair Ben Bernanke, a very bright economist, reassuring Congress and the public in early 2007 that any problems from mortgage defaults would be 'well-contained?' Now, Chair Jerome Powell and others tell us not to worry, because CLOs are not on banks' balance sheets."
- "There is a fallacy in this reasoning that should be apparent after 2007-09. You cannot have a wave of defaulting loans without shaking financial markets in general. Institutions thought entirely insulated from mortgage bonds were at the edge of an abyss in the fall of 2008. It can happen again."

June 29 Wolf Street article

When and if the CLO market implodes, the pain will be felt in the lower tranches held by mutual funds, hedge funds, private equity firms, and some pension funds.

- "There has been quite some hoopla surrounding Collateralized Loan obligations (CLOs) because the underlying leveraged loans - junk-rated loans often used by private equity firms to fund leveraged buyouts (LBO) and other highrisk endeavors such as special dividends - are now starting to come apart. There are approximately \$700 billion in US-issued CLOs outstanding."
- "US banks hold \$99 billion of these CLOs, according to S&P Global Market Intelligence. The rest are held by various institutional investors, such as insurance companies, pension funds, mutual funds, hedge funds, private equity firms, and the like. They're also held by entities overseas, including certain banks in Japan that have gorged on these US CLOs. But that's their problem."
- "One third of the CLOs in the US banking system are held by just one bank: JPMorgan Chase; and 80% of the CLOs in the US banking system are held by just three banks. But at each of these three gigantic banks, CLOs account for only 1.2% to 1.3% of total assets (total asset amounts per Federal Reserve Q1 2020):
 - JPMorgan Chase: \$34.0 billion in CLOs = 1.3% of its \$2.69 trillion in assets.
 - Wells Fargo: \$24.6 billion in CLOs = 1.2% of its \$1.76 trillion in assets.
 - Citigroup: \$21.4 billion in CLOs = 1.3% of its \$1.63 trillion in assets.

In 11th position down the list is the second largest bank in the US, Bank of America, with just \$807 million in CLOs, accounting for barely over 0% of its \$2.03 trillion in assets."

- "In other words, the largest four banks in the US hold \$81 billion of the \$99 billion of CLOs in the US banking system - but given the gargantuan size of their assets, this percentage-wise small CLO exposure is the least of their problems."
- "On the other hand, mezzanine, junior, and equity tranches accounted for over two-thirds of the CLOs held by investment funds, which include hedge funds and private equity funds, and they accounted for one-third of the CLO holdings of mutual funds."
- "This is where the vast majority of the risks are, and where the biggest dollar amounts are, and where the vast majority of the losses will be eaten."
- "'To summarize, our new data suggest that institutional investors have sizable exposures to risky CLO tranches,' said the Fed's report."
- "'These risky holdings appear to be larger than what market participants believe,' it said (underscore added). 'For example, analysis by Fitch Ratings shown in Table 3 suggests that pension funds only held AAA-rated notes' — when in reality, they gorged on riskier tranches to get the higher yield."



"So when these CLOs implode, they may cause minor ripples among a few large banks, amounting to less than a rounding error amid much larger loan losses; they may cause bigger ripples perhaps at Stifel; but they may cause some real heartache where the vast majority of the CLOs are held, and where most of the mezzanine, junior, and equity tranches are held: among mutual funds, hedge funds, PE firms, pension funds, and the like. And the Fed's report points out, the heartache may come as a surprise to 'market participants."

June 10 Financial Advisor article

Pacific Investment Management Co. has sat on the CLO sidelines for a decade. They are now preparing to get back in the game as they expect a CLO shakeout like the CDOs of 2007 and 2008.

- "The subprime mortgage meltdown turned Pacific Investment Management Co. off the CLO business for a decade. Now the coronavirus crisis is luring it back."
- "The investment firm has stayed away from the business of packaging and selling collateralized loan obligations in recent years because of lax lending standards and shrinking margins. That could change as the pandemic sparks a wave of defaults, purging the loan market of its excesses, said Josh Anderson, a managing director at the firm's Newport Beach, California headquarters."
- "In the aftermath, lenders with the available firepower will be able to charge higher borrowing costs, toughen underwriting standards and be pickier about what they buy. Anderson said Pimco could issue a CLO later this year, the first time that's happened since 2006."
- "'We have been positioning for a shakeout in the CLO market given the similarities with subprime,' he said. 'We've been staffing up for years but we're finally here. Hopefully our patience and resources will pay off."
- "Anderson says the rapid rise of CLOs over the past decade has created a recipe for disaster. As sales surged, lending safeguards were eroded in defiance of warnings from regulators that the market was piling ever-higher debt loads onto fragile balance sheets. To some, that echoed the run-up to the financial crisis, when Wall Street fed the housing boom-and-bust with its zeal for selling collateralized debt."
- "The CDOs that blew up the global financial system in 2007 and 2008 were pools of loans to consumers, rather than the businesses that underpin CLOs of today. But just like then, an economic downturn threatens to expose the problems of allowing debt to proliferate in the most vulnerable parts of the economy."
- "Some of the biggest CLOs are heavily exposed to industries like leisure, retail and energy, which UBS Group AG strategists caution are likely to languish even after shutdown measures are eased."
- "In the new era of austerity wrought by the coronavirus pandemic, Anderson expects borrowers to beef up covenants and protections on deals they bring to market."
- "'With risk premiums being wider it's likely you won't have to stretch and buy weaker credits to make deals work,' he said. 'CLOs will be more discriminating going forward.'"

Additional research by Dan Weil, Eva Cahen, and Jeff Ostrowski.

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