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Financial Instruments

In the first of three parts, Christopher L. Culp and J. Paul Forrester examine the post-financial crisis renaissance in collateralized loan obligations (CLOs). In this part, the authors empirically analyze the risks in the recent and current U.S. leveraged loan market.

BNA INSIGHTS: Post-Crisis Developments in U.S. Leveraged Loans and CLOs



BY CHRISTOPHER L. CULP AND J. PAUL FORRESTER

Since 2010, Collateralized loan obligations (CLOs) – i.e., structured products based on broadly syndicated leveraged syndicated bank loans – have enjoyed a post-financial crisis renaissance. Leveraged loans are loans rated below investment-grade (or with commensurate coupons) that are often used to finance highly leveraged transactions like leveraged buy-outs, leveraged recapitalizations, emergence from bankruptcy, and the like.

By the end of 2010, new issuance of U.S. leveraged loans was up to \$191.41 billion, of which 52 percent was institutional. New U.S. leveraged loan issuance then

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grew steadily through 2013, with more than 45 percent of new loans syndicated to institutional participants in each year. By the end of 2014, new U.S. leveraged loan issuance totaled \$940 billion, or about 36 percent higher than peak total issuance amounts in 2007.

Market participants, financial journalists, regulators, and other commentators have expressed widely divergent opinions about this renewed activity and the future prospects for the U.S. leveraged loan and related CLO markets. Some view the renewed activity in CLOs as the sensible search by investors for relative value and an acceptance of greater risk for greater reward together with efforts by financial intermediaries to utilize structured financing techniques for what they were originally intended to do – i.e., to distribute risks and rewards to those market participants most willing to bear them. They take comfort, moreover, that various changes in structured product design resulting from lessons learned since the crisis have provided sufficient new protections to assure that appropriate risk-adjusted returns can be earned on structured product investments.

Others, however, view the recent growth in new issuance of CLOs as a return to what they perceive as the pre-crisis “gravity-train” days of loose and expansive credit, excessive risk-taking by investors clamoring for incremental yield in a low interest-rate environment, and a concerted effort by Wall Street to offload the resulting risk exposures to Main Street through products like CLOs. Specifically, many commentators point to evidence of increased risks in the U.S. leveraged loans that serve as CLO collateral as a reason for concern unto itself. In Part One of this three-part series, we empirically analyze the risks in the recent and current U.S. leveraged loan market.

Among those raising concerns are U. S. banking regulators such as the Office of the Comptroller of the

Currency, who warned in the *Annual Survey of Credit Underwriting Practices* released in December 2014,¹ that the apparent deteriorations in underwriting standards for and the recent growth of “subprime” auto loans (i.e., auto loans to relatively high-risk borrowers) and “leveraged loans” (i.e., commercial and industrial loans to highly leveraged or below investment-grade borrowers).² Similarly, in its July 2014 *Monetary Policy Report*, the Federal Reserve cautioned that “[s]igns of excesses that could lead to higher future defaults and losses have emerged in some sectors, including for speculative-grade corporate bonds and leveraged loans.”³ Other regulators that have explicitly warned of recently heightened risks in leveraged lending include the U.S. Department of the Treasury’s Office of Financial Research and the Financial Stability Oversight Committee.⁴

In its September 2014 *Economic Letter*, the Federal Reserve Bank of Dallas (Dallas Fed) articulated three indicia for heightened risks in leveraged loans:

Leveraged loans, whose pricing reflects lenders’ appetite for the most speculative corporate debt, provide a market indicator of risk-taking ... Specifically, market watchers look for three characteristics. One,

a rapid increase in overall issuance often signals out-sized demand for risky assets. Two, acceptance of a narrow premium over benchmark rates may hint at insufficient pricing of possible default. Finally, a loosening of protective covenants allowing less-creditworthy entities to borrow also may indicate a less risk-averse environment. Regulators have noted all three during the past 18 months.⁵

The empirical evidence on the risk profiles of U.S. leveraged loans suggests that such regulatory concerns about recent increases in risk-taking by originators of U.S. leveraged loans are not unfounded. As examined in more detail below, two of these three measures of risk noted by the Dallas Fed indeed indicate increasing risks in leveraged loans. As we explain in Parts Two and Three of this article, however, heightened risks for leveraged loans do not automatically translate into comparable risks for investors in leveraged loan-backed CLOs.

U.S. Leveraged Loan Origination Volume

The first indicator of risk noted by the Dallas Fed is a “rapid increase in overall issuance” in the leveraged loan market.⁶ As Exhibit 1 demonstrates, lending to U.S. leveraged borrowers did indeed begin to rise in 2010 and has enjoyed a sustained recovery through 2013, when total U.S. leveraged loan issuance saw a high-water mark of \$1.135 billion. In 2014, U.S. leveraged loan issuance fell significantly to \$940 billion. Although lower than 2013 issuance, 2014 leveraged loan volume in the U.S. was still well above pre-crisis levels. As a result, the pronounced expansion of leveraged loan volume from 2009 through 2014 is generally consistent with the Dallas Fed’s “rapid increase in overall issuance” indicator of heightened risk.

¹ Office of the Comptroller of the Currency, *2014 Survey of Credit Underwriting Practices* (December 2014). See also Office of the Comptroller of the Currency, *Semiannual Risk Perspective from the National Risk Committee* (Spring 2015).

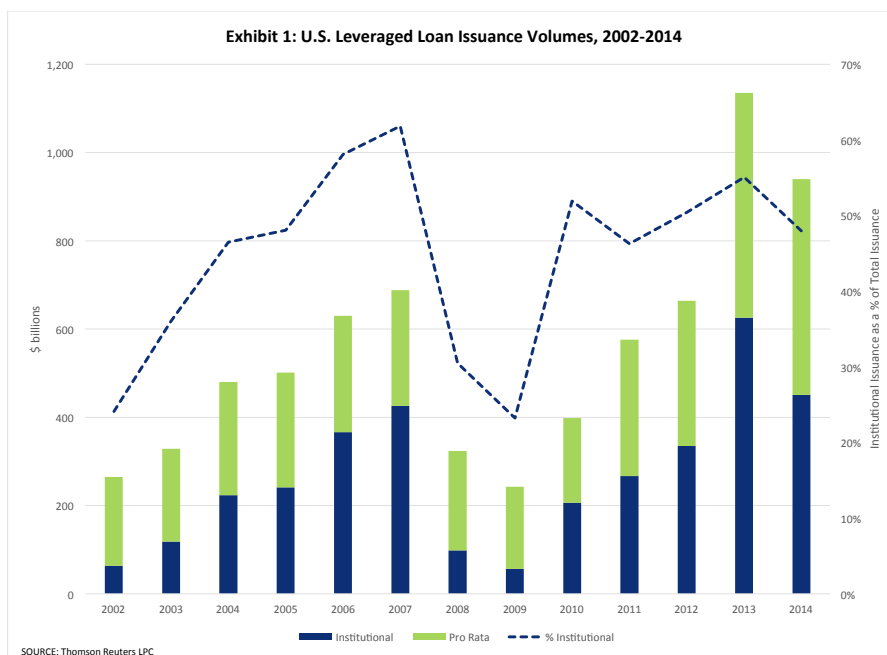
² Recent trends in U.S. subprime auto loans and structured products backed by such loans are analyzed in more detail in C. L. Culp and J. P. Forrester, “Have Pre-Crisis Levels of Risk Returned in U.S. Structured Products? Evidence from U.S. Subprime Auto ABS, CLOs, and Insurance-Linked Securities Markets,” *Journal of Structured Finance*, Vol. 21, No. 1 (Spring 2015). Portions of this article borrow from our previous article.

³ Board of Governors of the Federal Reserve System, *Monetary Policy Report* (July 15, 2014).

⁴ Office of Financial Research, “Financial Stability Risks Remain Moderate,” *Financial Stability Monitor* (June 2015), pp. 3-4, and Financial Stability Oversight Council, *2015 Annual Report* (2015), p. 114.

⁵ A. Musatov, and W. Watts, “Despite Cautionary Guidance, Leveraged Loans Reach New Highs,” *Federal Reserve Bank of Dallas Economic Letter*, Vol. 9, No. 10 (Sept. 2014).

⁶ *Id.*



Notably (and potentially mitigating the actual effect of this indicator), the proportions of *institutional* leveraged loans in 2013 and 2014 — although well above 2008 and 2009 levels — were still well below 2006 and 2007 pre-crisis amounts. In 2014, about 48 percent of U.S. leveraged loan issuance was institutional (including CLOs), as compared to 62 percent in 2007, suggesting that banks were originating and retaining significantly larger portions of leveraged loans.

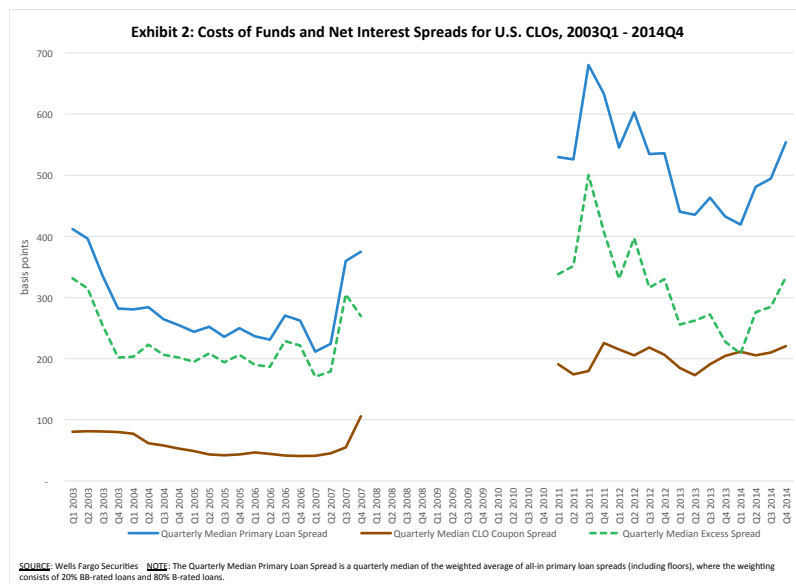
Credit Spreads on Leveraged Loans

The second risk indicator noted by the Dallas Fed is an acceptance by leveraged loan syndicate members and lenders “of a narrow premium over benchmark

rates [that] may hint at insufficient pricing of possible default.”⁷ The data presented in Exhibit 2 indicates that this is *not* a concern at present.⁸

⁷ *Id.*

⁸ Specifically, the light solid line in Exhibit 2 shows quarterly median weighted-average spreads on leveraged loans (in excess of the London Interbank Offered Rate (LIBOR)) that were collateral for CLOs in the sample. The weighted average is based on quarterly median all-in rates on loans rated BB (20 percent) and loans rated B (80 percent). The dark solid line reflects quarterly median weighted-average spreads over LIBOR on CLO liabilities. And the light dashed line represents weighted-average spreads of CLO collateral in excess of CLO coupon liabilities (*i.e.*, the “excess spread”).



From 2003 through the second quarter of 2007, the average excess spread was 218 bps. In the last two quarters of 2007, the average excess spread rose to 287 bps. In the post-crisis period from 2011 through 2014, the average excess spread was an even-higher 318 bps, with a fourth-quarter 2014 average excess spread of 333 bps. The excess spreads and CLO coupon spreads shown in Exhibit 2 thus do not indicate an insufficient pricing of risk when compared to pre-crisis excess spreads and coupon rates.

Borrower-Friendly Leveraged Loan Issuance

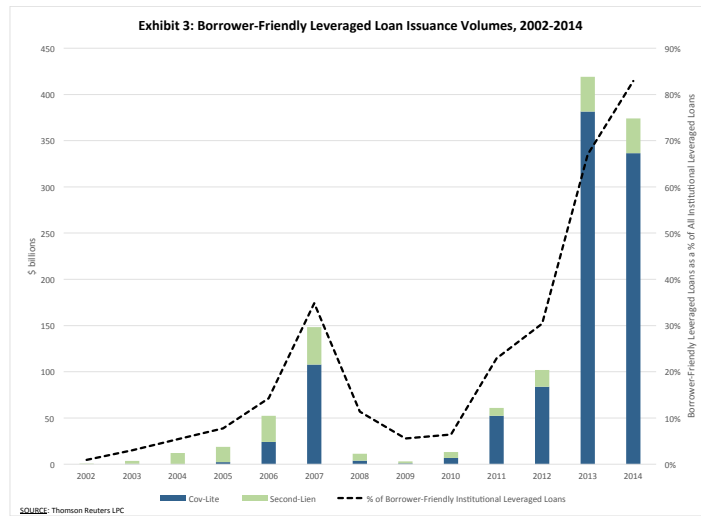
The third risk indicator noted by the Dallas Fed is a loosening of protective covenants included for new leveraged loans. In fact, multiple U.S. financial regulators have repeatedly noted that the proportion of “borrower-friendly” loans is perceived (at least by them) to be relatively riskier as an indicator of overall credit risk in the leveraged loan market.

The two most popular types of borrower-friendly leveraged loans are covenant-lite (or cov-lite) and second-

lien loans. Cov-lite loans contain few or no financial covenants, and second-lien loans are collateralized by only the amount of underlying collateral that is left over after first-lien lenders have been fully repaid following an event of default. These borrower-friendly leveraged loans are especially popular with CLO managers because of the ostensibly higher yields they offer to investors. As the proportion of the total institutional leveraged loan market that is borrower-friendly has risen over time, moreover, it is almost a necessity for CLOs to be able to acquire and hold at least some of these types of leveraged loans in order to remain invested.

As Exhibit 3 indicates, borrower-friendly loans grew significantly both in absolute dollar amounts and as a proportion of total institutional leveraged loan issuance in 2006 and 2007 going into the crisis.⁹

⁹ Exhibit 3 shows the annual issuance volumes of U.S. leveraged loans that were cov-lite (dark-colored columns) or second-lien (light-colored columns), as well as the percentage of total institutional U.S. leveraged loan volume that was borrower-friendly over the 2002-2014 period (dashed black line).



After experiencing a significant contraction from 2008 through 2010, Exhibit 3 shows that total borrower-friendly U.S. leveraged loan issuance has more than recovered from pre-crisis levels. Indeed, total issuance of borrower-friendly U.S. leveraged loans in 2013 was almost double the amount of such loans at the pre-crisis high-water mark in 2007. The proportion of institutional leveraged loans that are borrower friendly, moreover, has increased substantially in the last few years. In 2014, borrower-friendly loans accounted for about 83 percent of total institutional U.S. leveraged loan volume — a high-water mark for the 13-year period shown in Exhibit 3.

Exhibit 4 shows average secondary market bid prices for cov-lite (solid light-colored line), second-lien (dashed light-colored line), and all institutional term loans that received multiple price quotes (black line) from 2011 through 2014. As Exhibit 4 indicates, all leveraged loans experienced relatively significant price declines beginning in August 2011 that persisted until about October 2011. Predictably, the prices of cov-lite loans fell by more than institutional term loans generally, and prices of second-lien term loans (which arguably expose investors to the greatest credit risk) declined the most.

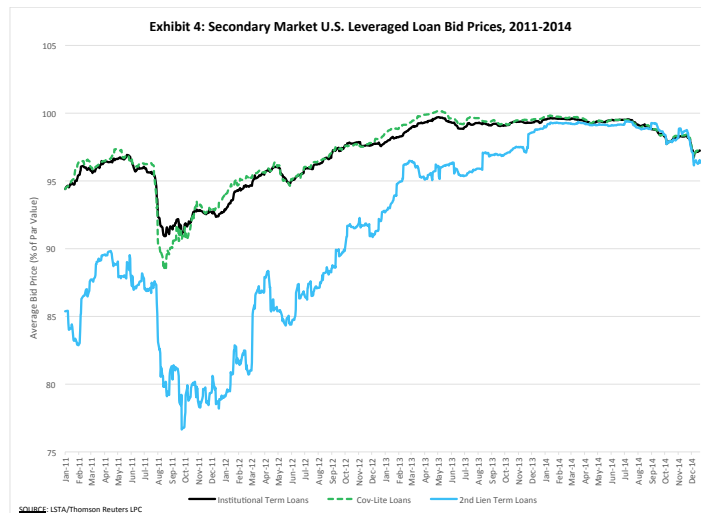


Exhibit 4 further shows that the average bid prices of all institutional term loans along with cov-lite and second-lien leveraged loans recovered from Autumn 2011 through January 2014. From January 2014 until July 2014, moreover, average bid prices for all three loan types were both stable and generally price-comparable. In the last half of 2014, however, average bid prices generally declined, with the average bid price of second-lien term loans ending 2014 at about 96.32, as

compared to average bid prices for cov-lite loans of 97.34 and average bid prices for all institutional leveraged loans of around 97.24.

The most striking feature of Exhibit 4 is that secondary market average bid prices for the relatively riskiest second-lien term loans exhibit deeper discounts to par and more extreme price changes in the 2011 – 2013 time period. By early 2014 when leveraged loan markets had stabilized and were enjoying a strong recov-

ery, however, second-lien term loan prices were only at a barely discernible discount to cov-lite and all institutional leveraged loan prices. During this recent period, moreover, cov-lite and all institutional averages bid prices were roughly equivalent.

Contractual credit spreads on cov-lite and second-lien loans are, of course, higher than spreads on leveraged loans with first liens and financial covenants. As such, the average bid prices of these different loans does not tell us much about the *absolute* pricing of risk of these different loans. Those price differentials only tell us about how the market perceives the risk of these loan types relative to their initial contractually fixed credit spreads. Nevertheless, the apparent “convergence” of pricing is a strong indicator that *either* market participants were not adequately incorporating the actual risks of these different loans previously *or*, on the contrary, that market participants had gotten much better at pricing the relative credit risks of leveraged loans by around 2014.

Conclusion

The data presented above are consistent with concerns expressed in the media and by various regulators that U.S. leveraged loans have exhibited increasing risks to borrowers in the last few years, based on total leveraged loan underwriting volume and the proportion of borrower-friendly loans. Credit spreads on CLOs based on leveraged loans, however, tell a different story. Nor does the empirical evidence about total leveraged loan issuance and the proportion of borrower-friendly loans provide *prima facie* evidence that CLO tranches based on such loans inherit heightened loan-level risks.

In Parts Two and Three of this article, we analyze in more detail why there are many good reasons to believe that CLO senior-tranche investors are not significantly exposed to the recent increases in risk in U.S. broadly syndicated leveraged loans.