The V ˚ @# ˙# ˙U ˙" monitors developments in the capital markets globally and analyzes their potential impact on the investment portfolios of U.S. insurance companies. Please see the Capital Markets Bureau website at INDEX.

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(ABS CDOs), commercial real estate/commercial-mortgage backed securities (CRE/CMBS CDOs), residential-mortgage backed securities (RMBS CDOs), and even other CDOs or CLOs (CDO-squareds). As discussed in this primer, CLOs are collateralized by broadly syndicated bank loans (BSLs), as well as middle market loans. For all aforementioned CLOs, CBOs and CDOs, principal and interest income earned on the underlying pool of assets is used to pay periodic interest to investors (most often, semi-annually or quarterly) and principal when due at maturity (on average, 10 years). The first CBO and CLO were brought to market in the late 1980s, and as the market evolved, CDOs began to appear.

Unlike CLOs, CDOs and CBOs had shown to be volatile asset types during the recent financial crisis. This was due in part to the volatility of the underlying commercial and residential mortgage loans. In particular, RMBS CDOs had undergone severe and multiple ratings downgrades by the three major nationally recognized statistical ratings organizations (NRSROs) o 'h Global Ratings, Fitch k 'U '@ 'o due to the negative impact of delinquent, defaulted and foreclosed residential mortgage loans held in the underlying RMBS pools, especially those containing subprime and adjustable rate mortgages. CLOs, however, did not experience this trend, due in part to the underlying bank loans and the ability of the capital structure to withstand certain structural performance measures (relative to credit enhancement levels and interest coverage). As a result, CLOs were deemed the survivors of the financial crisis.

Chart 1 shows the capital structure of an arbitrage CLO transaction. Investor proceeds are used to purchase a portfolio of leveraged bank loans, whose principal and interest are used to pay debt service to the noteholders, with any remaining amounts paid out to the equity investors. The transaction is 'portfolio of leveraged bank loans (assets) and classes of CLO debt (liabilities), with the equity investors receiving any excess cash flows

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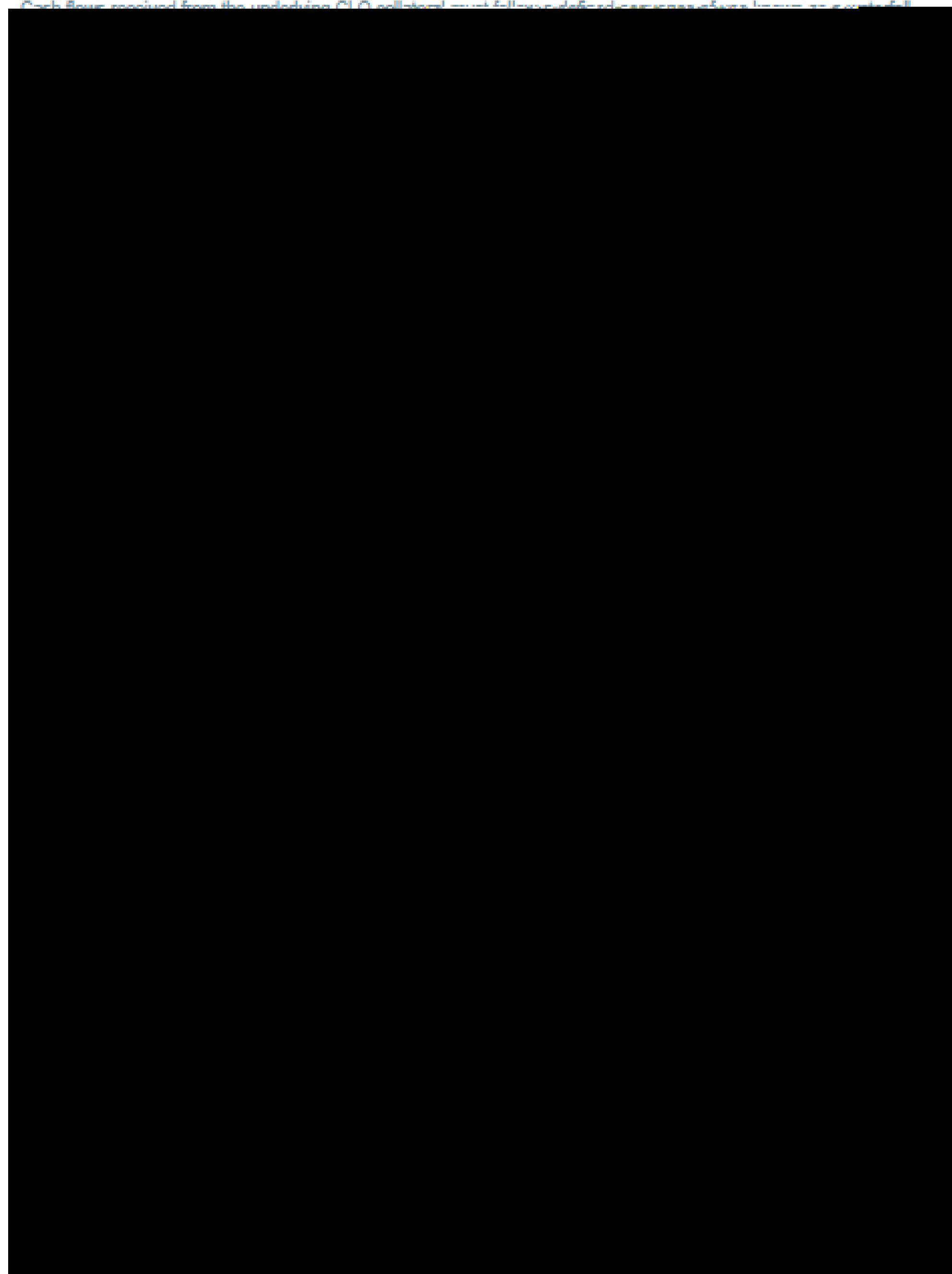
arbitrage CLOs, but they differ in that balance sheet CLOs are structured primarily as a funding source for the issuer (usually a bank or specialty finance company). With balance sheet CLOs, the issuer securitizes the bank loans (middle market or broadly syndicated) off its balance sheet into an SPV, for the purpose of raising capital, and it typically retains the equity tranche.

Whether arbitrage or balance sheet, the CLO capital structure is comprised of CLO tranches (or CLO debt) plus an equity tranche, which serves as the first loss position. The tranches range from senior to subordinated; the more subordinated the bonds, the lower the credit quality, and the more required credit enhancement (i.e., the ratio of the principal value of the collateral to the principal value of the CLO debt)

commercial mortgage-backed securities (CMBS) and other CLOs). Post-crisis, around 2010, a new vintage of CLOs emerged with structural changes that were intended to strengthen credit support, including

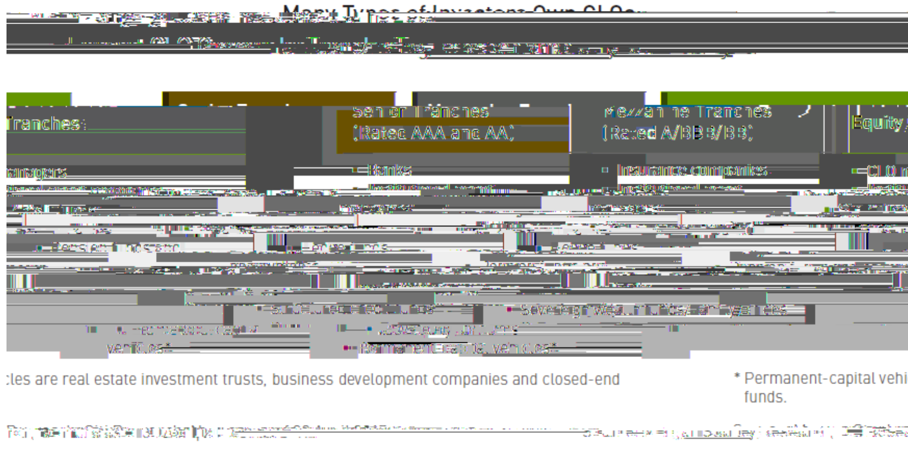
Chart 2:



o '7 k ' The 2018 Annual Manual (U.S. Leveraged Finance Primer) Leveraged Loans, 'U

With regard to the composition of CLO investors, they vary by tranche, as shown in Table 1. Investors with the least risk-appetite tend to invest in the senior-most tranches, while those with a higher tolerance for risk invest in the equity (first-loss) tranche. The majority of U.S. insurer CLO investments are in senior and mezzanine (middle) tranches.

Table 1:



CLO managers are responsible #O\ underlying portfolio. As such, they must have the appropriate infrastructure in place to properly manage the transactions. This not only includes having seasoned portfolio managers and credit analysts as part of the team, but also experienced operations professionals and appropriate data management systems in place. Therefore, #O\ investor (i.e., insurer) review, in order to derive comfort with their ability and experience as a CLO manager.

Depending on size, a typical CLO manager will have one or more portfolio managers (sometimes they are asset-type specific), credit analysts (who may be industry specialists or generalists) and operations professionals. CLO managers may include affiliates of private equity firms, hedge funds, large financial institutions and banks, and insurance companies, too. CLO managers typically receive a senior management fee as a percentage of the underlying portfolio of bank loans , as directed and prioritized in the aforementioned waterfall. In addition, CLO managers may receive a subordinated management fee (at a lesser percentage) after the senior debt holders have been paid, which is also considered an incentive fee for the managers to make prudent investment decisions for the benefit of investors throughout the whole capital structure.

In addition to thorough credit analysis of the CLO investment, reviewing the infrastructure of the CLO manager is equally important for the investor. This due diligence is intended to help the investor ascertain whether the CLO manager understands the mechanics of the CLO structure and the credit assessment of the underlying assets (leveraged bank loans), as well as to derive comfort that the CLO manager is managing to investor interests (and not his/her own).

With the increase in demand for CLOs in recent years, new CLO managers came into the market, taking advantage of favorable economic conditions. Currently, the largest 30 CLO managers represent 60% of CLO issuance, according to Fitch Ratings data. In 2017, nine new CLO managers entered the market (compared to four in 2016).

The federal Dodd Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) risk-retention rules went into effect on Dec. 24, 2016, for ABS, CMBS, RMBS and similar securitizations. The rules are designed to prevent lenders from making risky loans, packaging them into bonds and leaving investors with all of the losses if/when payment defaults begin to occur. The rules are intended to align interests between issuers and their investors. The rules came about after subprime mortgage bonds triggered significant losses for banks and investors during the 2008 financial crisis. Participants in the CLO market were initially concerned that the risk-retention rule would limit total CLO issuance. In 2014, CLO new issuance reached a record level of $124 billion; in 2017, it reached its second highest level at $117 billion, according to Thomson Reuters LPC. (See Appendix for historical annual U.S. CLO issuance.)

Effective February 2018, a court ruling exempted traditional (BSL) CLOs from having to comply with Dodd-Frank risk-retention rules whereby the CLO manager would have been required to retain at least 5% interest in the total capital structure. The ruling is expected to benefit smaller CLO managers who would otherwise have been challenged to comply with the requirement (as they may not have had the ability to easily raise the large sums of capital needed to comply), and perhaps, they may have been prohibited from issuing new CLO transactions. Note, however, that this exemption does not apply to middle-market CLOs as they are subject to the 5% risk retention rule.

Because of the higher-yielding nature of the underlying leveraged bank loans, even after subtrac[ )]TJE1 1 h1 308.88 52.3

underlying portfolio, and, in turn, less funds available to pay the CLO investors. For this reason, it is important that CLO portfolios are diversified by issuer and industry. If the leveraged bank loan market experiences difficulties, the liquidity of CLOs could also be negatively impacted.

Prepayment risk may also arise as interest rates decrease and leveraged bank loan issuers refinance any floating rate loans, in turn reducing the underlying OPJETBT1 0 0 1 287.26 lyinany

BSL CLOs
Refinancing/Reset CLOs
MM CLOs

Once the reinvestment period has ended, the CLO manager pays down the debt (tranches, or CLO liabilities) following the priory of payments included in the legal documents, using bank loan prepayments or proceeds from the sale of underlying assets.

Published NAIC Capital Markets Bureau Special Reports on CLOs:

U.S. Insurance Industry Exposure to Collateralized Loan Obligations & Market Trends, June 2014

U.S. Insurance Industry CDO/CLO Update, June 2012

Insurance Company CDO Exposure, Feb. 2011