

Understanding Investments in Collateralized Loan Obligations (“CLOs”)



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Introduction

Purpose: to educate and provide background about Collateralized Loan Obligations (“CLOs”)

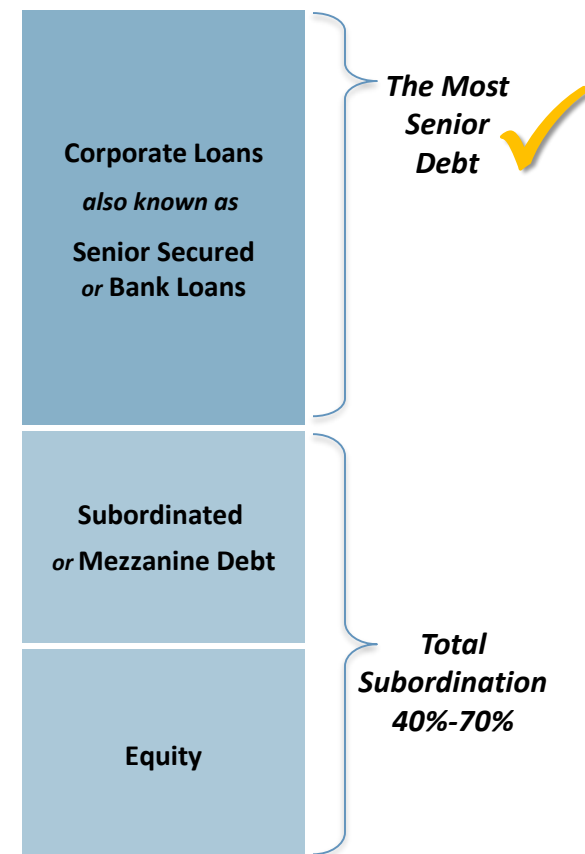
- **We intend to address the following topics:**
 - What are CLOs?
 - How are CLOs structured?
 - What are the underlying assets in CLOs?
 - How have CLOs performed throughout different market cycles?

Understanding the Assets in CLOs

CLO Securities are comprised of Senior Secured Corporate Loans (“Loans”) of larger companies

- Loans are the most senior debt of a company. Loans are secured by the assets of the company. Should a company default, Loans have historically had high recoveries (on average ~80% of par)⁽¹⁾
- The Loans in CLOs are typically to larger companies – approximately half of Loans held in outstanding U.S. CLOs have facility sizes of over \$1 billion⁽²⁾
- The Loan market today consists of ~\$1.4 trillion⁽³⁾ of Loans. Loans generally pay a floating-rate coupon comprised of a fixed spread over a base rate, typically LIBOR, which is reset monthly or quarterly
- Investors can participate in the Loan market in several ways:
 - Purchase Loans directly (institutional investors only)
 - Invest in mutual funds or closed-end Loan funds
 - **Invest in CLO Securities** (institutional investors only)
- CLOs provide investors with exposure to actively managed, diversified portfolios of Loans. A single CLO Loan Portfolio can offer exposure to ~200-300 individual Loans
- A diversified portfolio of CLO Securities can offer investors aggregate exposure to over 1,000 U.S. companies

Illustrative Corporate Capital Structure



Illustrative corporate capital structure is shown for illustrative purposes only. LIBOR refers to “London Interbank Offered Rate”.

1. Moody’s Investors Services, “Annual Default Study: Corporate Default and Recovery Rates, 1920-2017.”
2. Source: Ares *INsight* database. Represents median loan facility size for Loans held within U.S. CLOs outstanding as of February 2, 2019. CLO market includes data from 917 CLOs across 122 managers.
3. As of December 31, 2018. Source: Ares *INsight* database, Intex. Assumes a 1.15 EUR/USD exchange rate. S&P Capital IQ: S&P/LSTA Leveraged Loan Index, European Leveraged Loan Index (ELLI). Assumes a 1.15 EUR/USD exchange rate.

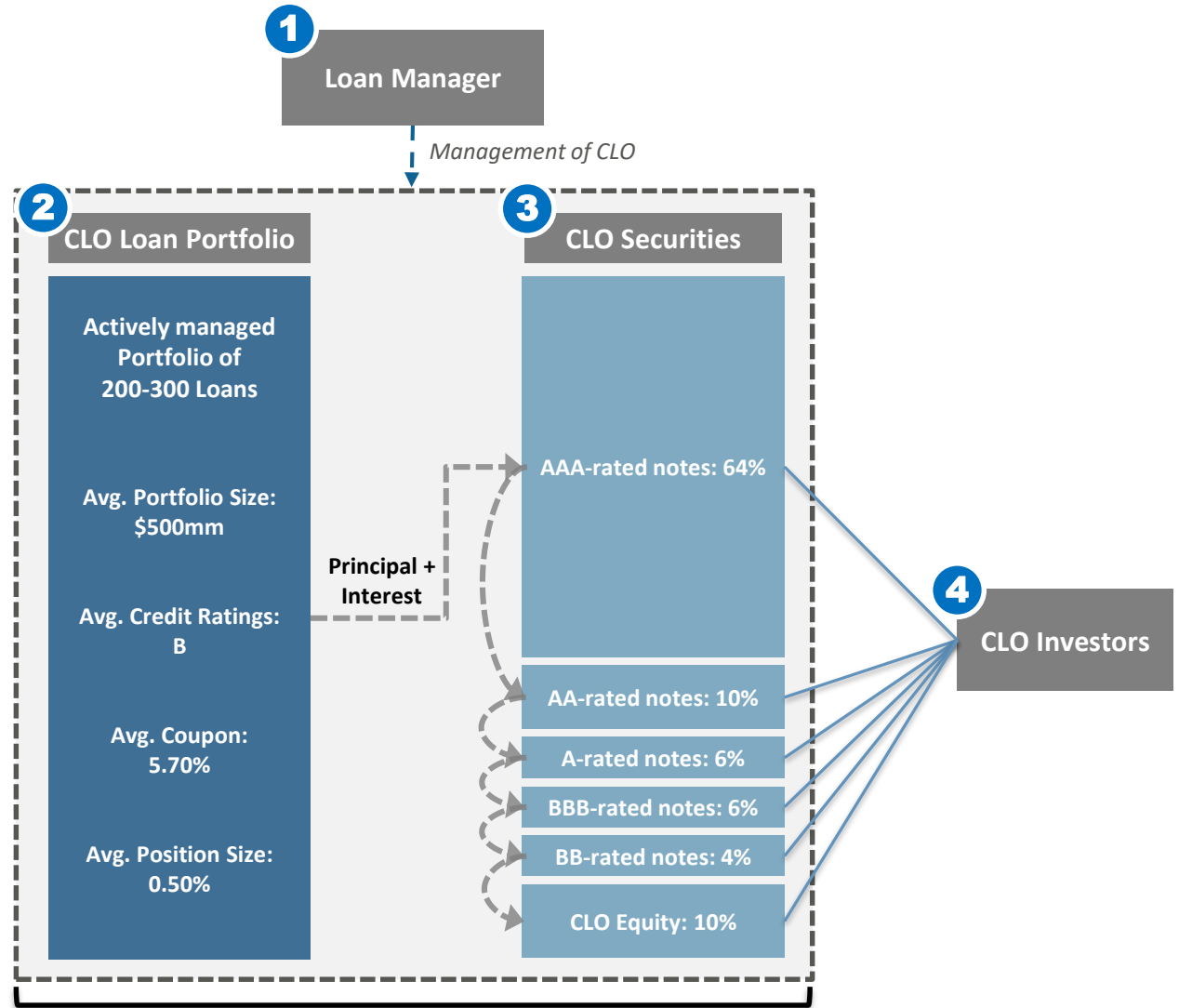
CLOs are a Type of Loan Fund⁽¹⁾

1 LOAN MANAGER:
An institutional asset manager who actively manages the CLO Loan Portfolio for the life of the fund.

2 CLO LOAN PORTFOLIO:
A diversified portfolio of Loans selected by the Loan Manager. The Loan Portfolio collateralizes the issued Securities.

3 CLO SECURITIES:
Securities issued by the CLO and purchased by investors.

4 CLO INVESTORS:
Qualified institutions who select CLO Securities based on risk and return goals.



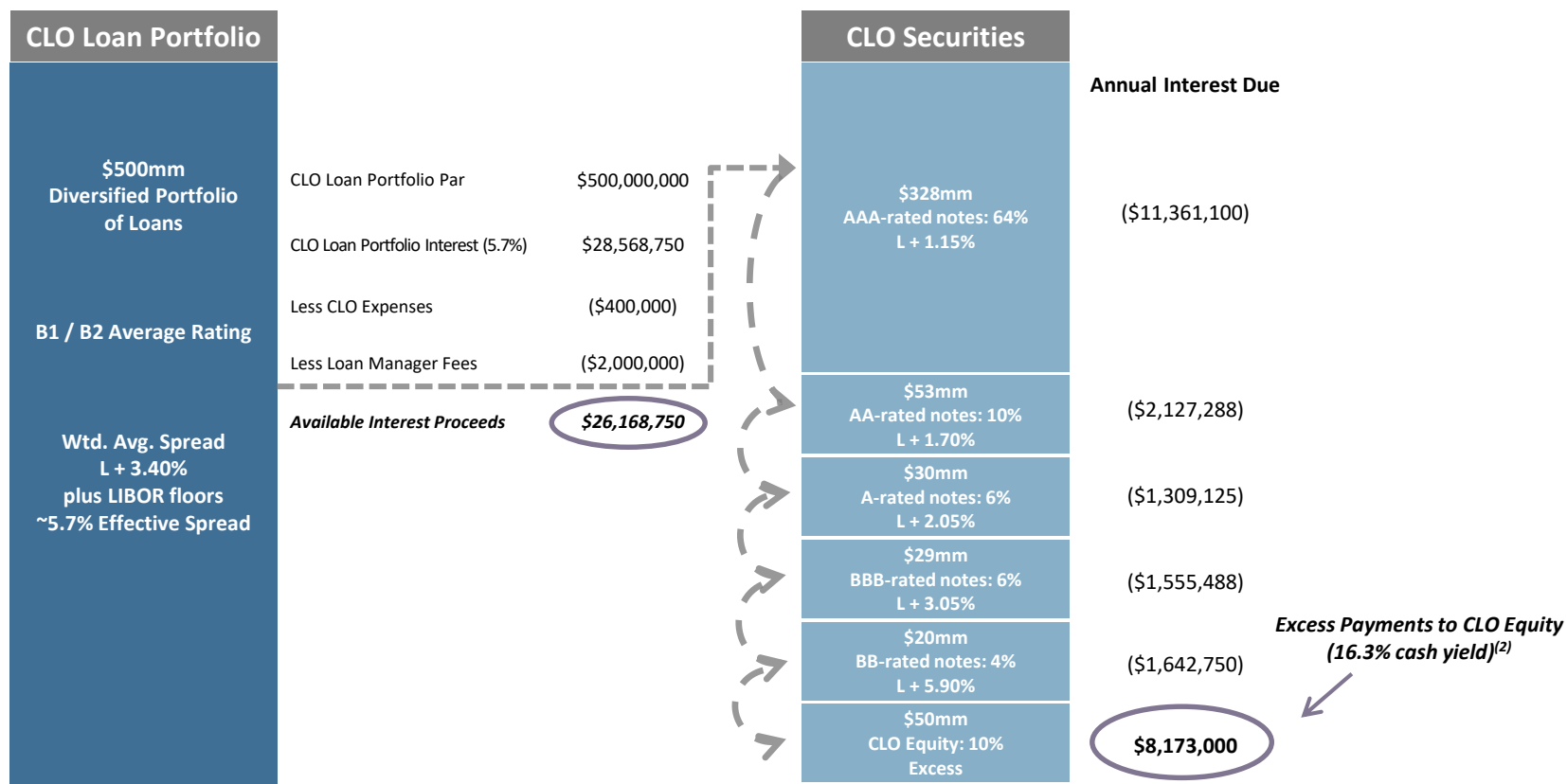
A CLO consists of a Loan Portfolio and issued CLO Securities.

There can be no assurance potential returns will be achieved. As with any investment there is risk, including the loss of principal.

1. The sample CLO economics shown are for illustrative purposes only and based on a CLO structure Ares believes is typical of recent primary CLOs.

How do CLOs Work?⁽¹⁾

1. A Loan Manager constructs a CLO Loan Portfolio
2. The capital needed to purchase the CLO Loan Portfolio is raised by issuing CLO Securities
3. Investors participate in the CLO by purchasing CLO Securities, all of which are secured by the CLO Loan Portfolio
4. The cash flows generated by the CLO Loan Portfolio are distributed to the CLO Securities, pursuant to a priority of payments



There can be no assurance potential returns will be achieved. As with any investment there is risk, including the loss of principal.

1. The sample CLO economics shown are for illustrative purposes only and are hypothetical, based on a CLO structure Ares believes is typical of recent primary CLOs.
2. The CLO Equity cash yield on par is the estimated cash yield on the entire notional of the CLO Equity Security. CLO Equity Securities receive net income distributions provided the CLO remains in compliance with certain tests, including minimum overcollateralization ratios.



CLO Securities Benefit from Credit Enhancements

CLOs provide protection from losses in the underlying CLO Loan Portfolio in four key ways

1 Asset Coverage

Also called overcollateralization, asset coverage provides a cushion against future defaults. The more senior the tranche, the greater the overcollateralization.

2 Excess Spread

CLOs are designed to generate excess interest income paid to equity investors. If the CLO Security underperforms, this income is reallocated to CLO Debt holders or used to replenish collateral.

3 Active Management

Loan Managers actively monitor and manage underlying Loan portfolios. Their management fees are generally linked to the performance and good health of the CLO Securities.

4 Covenants

CLOs include a number of features that are protective of CLO Debt tranches including Loan Portfolio diversification requirements and strict limits on certain risks and types of collateral.

Credit enhancements substantially reduce the chances of default for CLO Debt Securities

Case Study: 2018 Vintage CLO

With 9%, 14%, and 22% credit enhancement respectively, the double-B, triple-B, and single-A CLO Debt Securities can withstand constant annual default rates of over 7%, 11%, and 17% within the underlying CLO Loan Portfolio without suffering a principal loss on the investment.

Tranche	Asset Coverage ⁽¹⁾	Default Resiliency ⁽²⁾
AAA	155%	30.1 CADR
AA	130%	21.9 CADR
A	122%	17.3 CADR
BBB	114%	11.6 CADR
BB	109%	7.5 CADR

As with any investment there is risk, including the loss of principal. For illustrative purposes only. Asset coverage and default resiliency characteristics will vary across all CLO securities.

1. Asset Coverage: measures the excess collateral in the fund to cover the given tranche. If a tranche has an asset coverage ratio of 115%, then for every dollar of debt through that tranche, there is \$1.15 of collateral.
2. Default Resiliency: measures the constant annual default rate within the underlying portfolio that a given CLO tranche can withstand before losing \$1 of principal. Also known as the “break-even default rate.” If a tranche has a 19% break-even default rate, the underlying portfolio can experience 19% annual defaults for the life of the CLO before the tranche would be at risk of losing \$1 of principal. By comparison, according to Moody’s and S&P, the long-run average default rate for speculative-grade credit is less than 3% per annum.



Economics of CLO Equity

Attractive investment characteristics include high current income, short investment horizon, exposure to senior corporate credit risk and potential return upside

Investing in CLO Equity Today

- **Current income may continue to be paid even during market stress**
- **CLO Debt spreads are at or near five-year tights**
- **Returns may improve as a result of Loan market volatility**
- **Potential for better than expected returns due to Loan Manager outperformance**
- **Market inefficiencies abound as CLO Equity trades to a market Base Case despite wide variance**

Sample CLO Economics (annualized)⁽¹⁾

ASSETS	PAR AMOUNT	AVG LOAN COUPON	INTEREST INCOME
CLO Loan Portfolio	500,000,000	5.71%	28,568,750
EXPENSES			EXPENSE
Deal Expenses (0.08%)			(400,000)
Senior Loan Manager Fees (0.15%)			(750,000)
CLO Debt Securities Interest Expense			(17,995,750)
Contingent Loan Manager Fees (0.25%)			(1,250,000)
TOTAL EXPENSES (~4.08%)			(20,395,750)
NET INCOME (INTEREST INCOME MINUS TOTAL EXPENSES)			8,173,000
CLO EQUITY FACE AMOUNT			50,000,000
CLO EQUITY CASH YIELD⁽²⁾ (NET INCOME / CLO EQUITY FACE)			16.3%

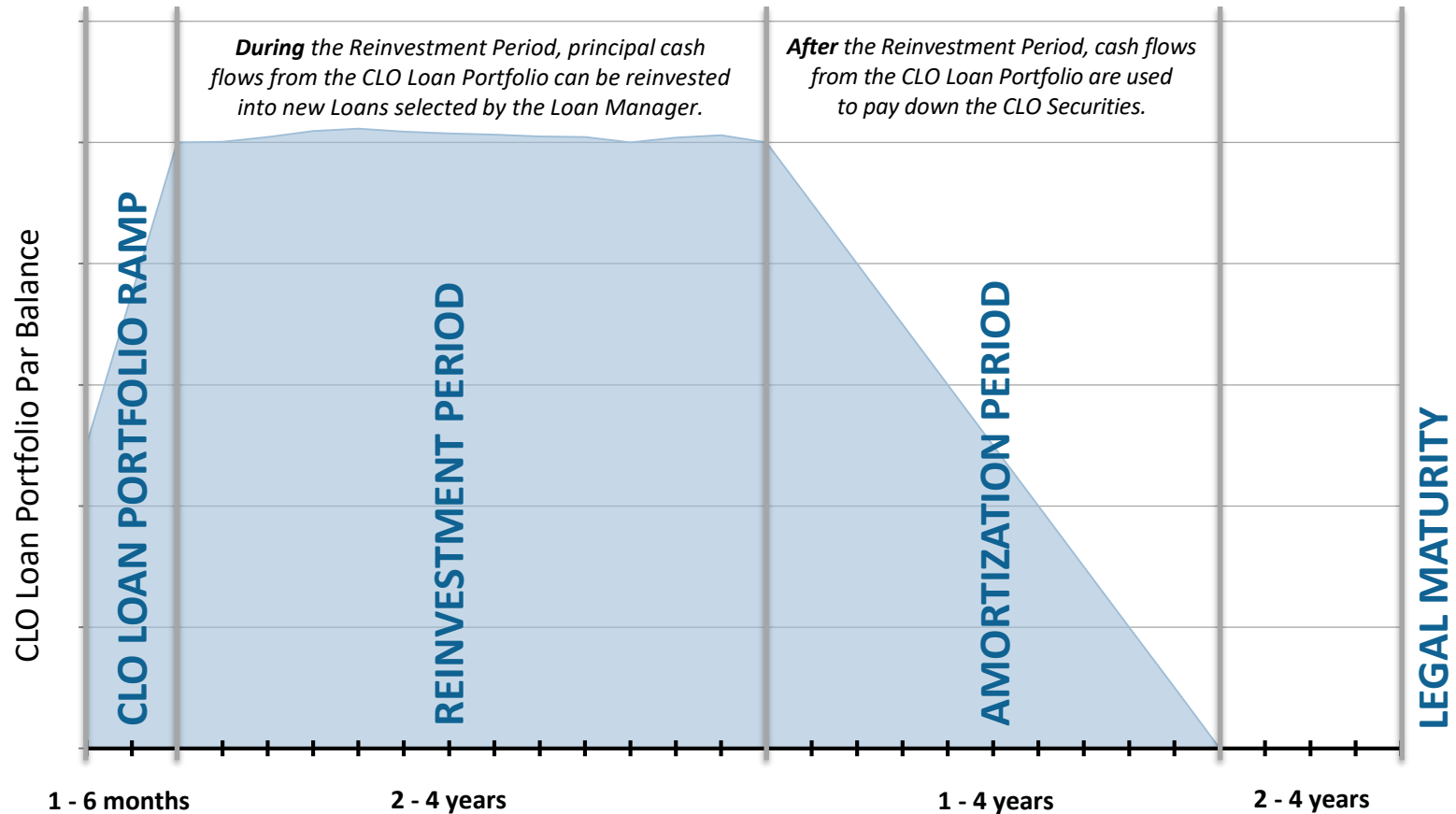
There can be no assurance potential returns will be achieved. As with any investment there is risk, including the loss of principal. Based on Ares' market observations and analysis.

1. The sample CLO economics shown are for illustrative purposes only and based on a CLO structure Ares believes is typical of recent primary CLOs.
2. The CLO Equity cash yield on par is the estimated cash yield on the entire notional of the CLO Equity Security. CLO Equity Securities receive net income distributions provided the CLO remains in compliance with certain tests, including minimum overcollateralization ratios.



Life Cycle of a CLO

CLOs typically have a legal term of 11-12 years, but CLO Securities are designed to be repaid earlier through a natural amortization of principal from Loan repayments



Note: Shown for illustrative purposes only. The terms of a given CLO will vary.

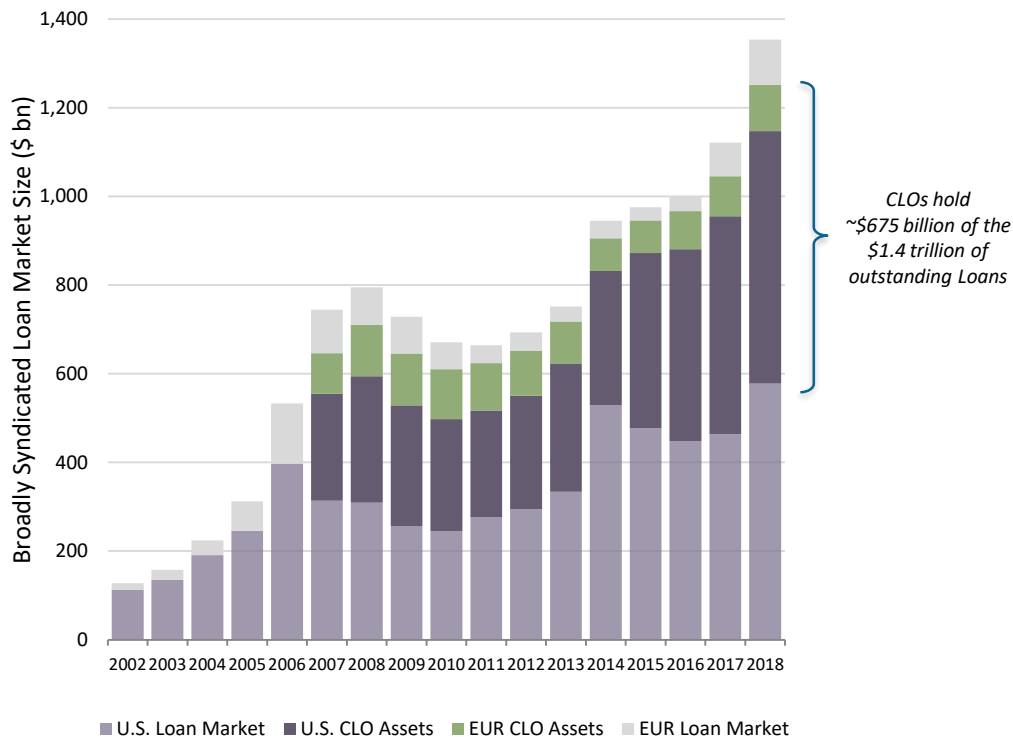
Understanding the CLO Market and Investment Performance



CLOs Have Consistently Accounted for Half of the Loan Market

CLOs constitute the largest class of institutional capital within the Loan market^(1,2)

~50% of all Loans are held within CLO Loan Portfolios



A typical CLO Loan Portfolio⁽³⁾

Characteristic	Median Statistic
Fund Size	\$500mm
# of Positions	432
Market Price	95.68
Yield	7.82%
First Lien %	98%
Second Lien %	2%
HY Bond %	0%
CCC exposure %	4.7%
Credit Quality	B

As of December 31, 2018, unless otherwise noted.

1. Source: Ares *INSight* database, Intex. Assumes a 1.15 EUR/USD exchange rate.
2. Source: S&P Capital IQ: S&P/LSTA Leveraged Loan Index, European Leveraged Loan Index (ELLI). Assumes a 1.15 EUR/USD exchange rate as of December 31, 2018.
3. As of December 2018. Source: Ares *INSight* database, Intex.

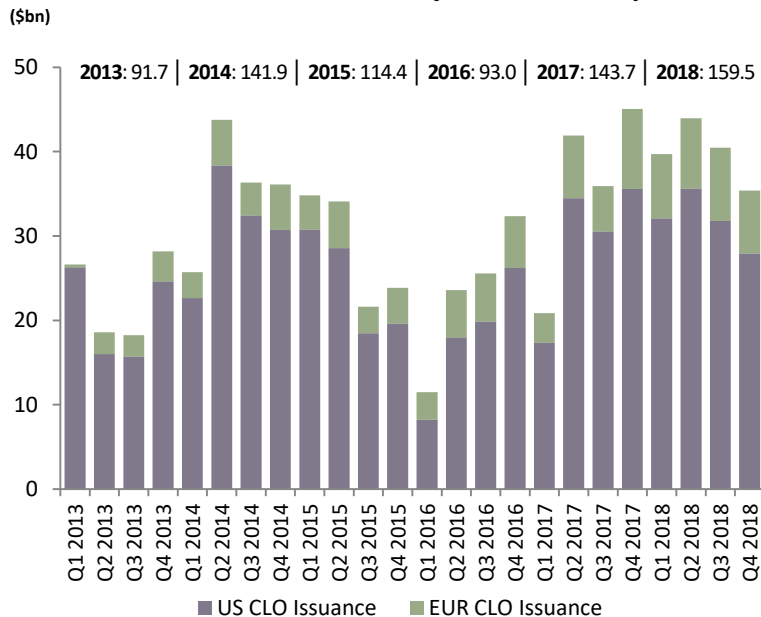


The Market for CLO Securities

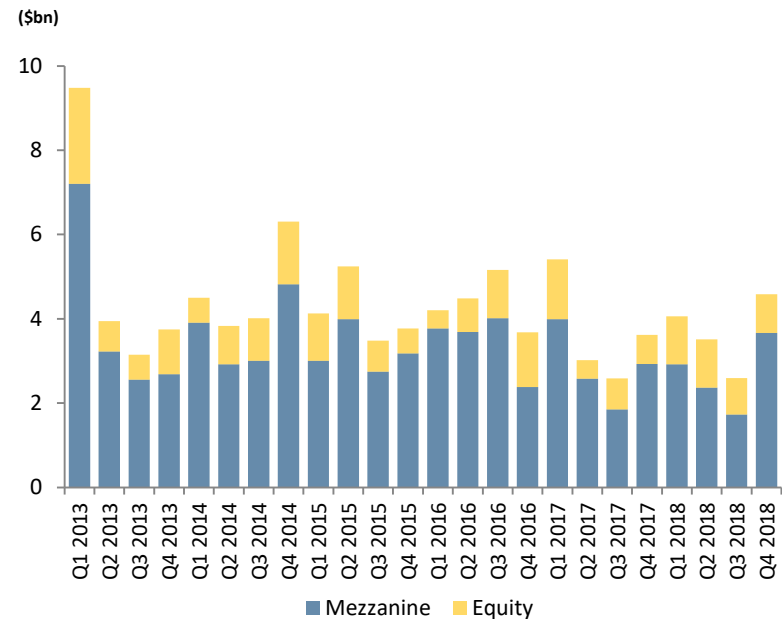
A ~\$675 billion market consisting of 1,490+ CLOs and ~10,400 unique CLO Securities⁽¹⁾

- **Twenty year old market:** More than 1,920 U.S. CLOs have been issued since 1995, including 300+ in 2018⁽¹⁾
- **Active primary and secondary markets** with more than 300 active institutional investors participating⁽³⁾

Global CLO **Primary** Market Activity⁽²⁾



Global CLO **Secondary** Market Activity⁽³⁾



Figures above are in USD. As of December 31, 2018. Assumes a 1.15 EUR/USD exchange rate.

1. Source: Ares *INsight* database, Intex.
2. Source: S&P LCD: "CLO Databank".
3. Source: Citi CDO Research.

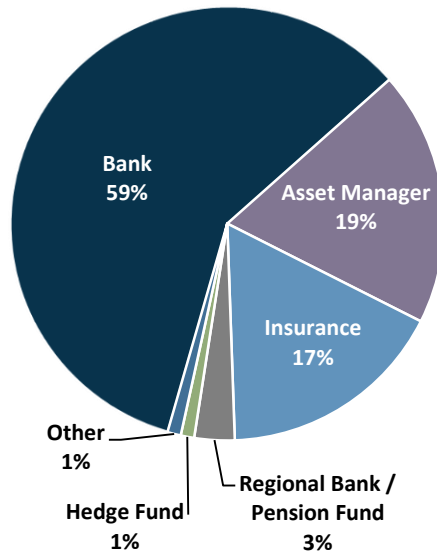


CLO Investors

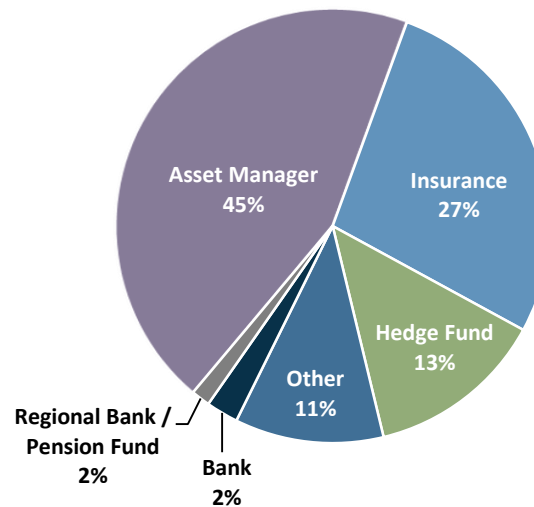
Large, sophisticated financial institutions dominate the CLO Security investor base

Investor Base by CLO Security⁽¹⁾

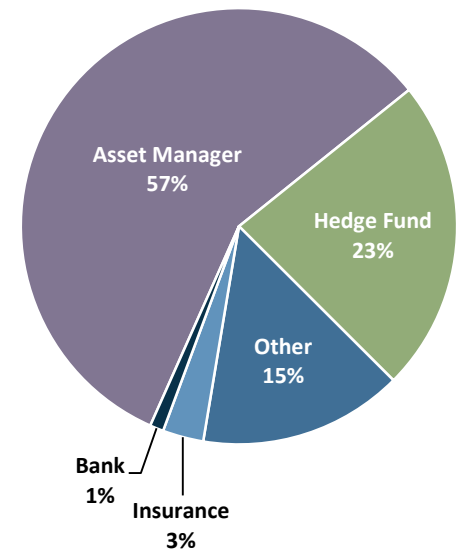
CLO AAA Purchases



CLO Mezzanine Purchases



CLO Equity Purchases



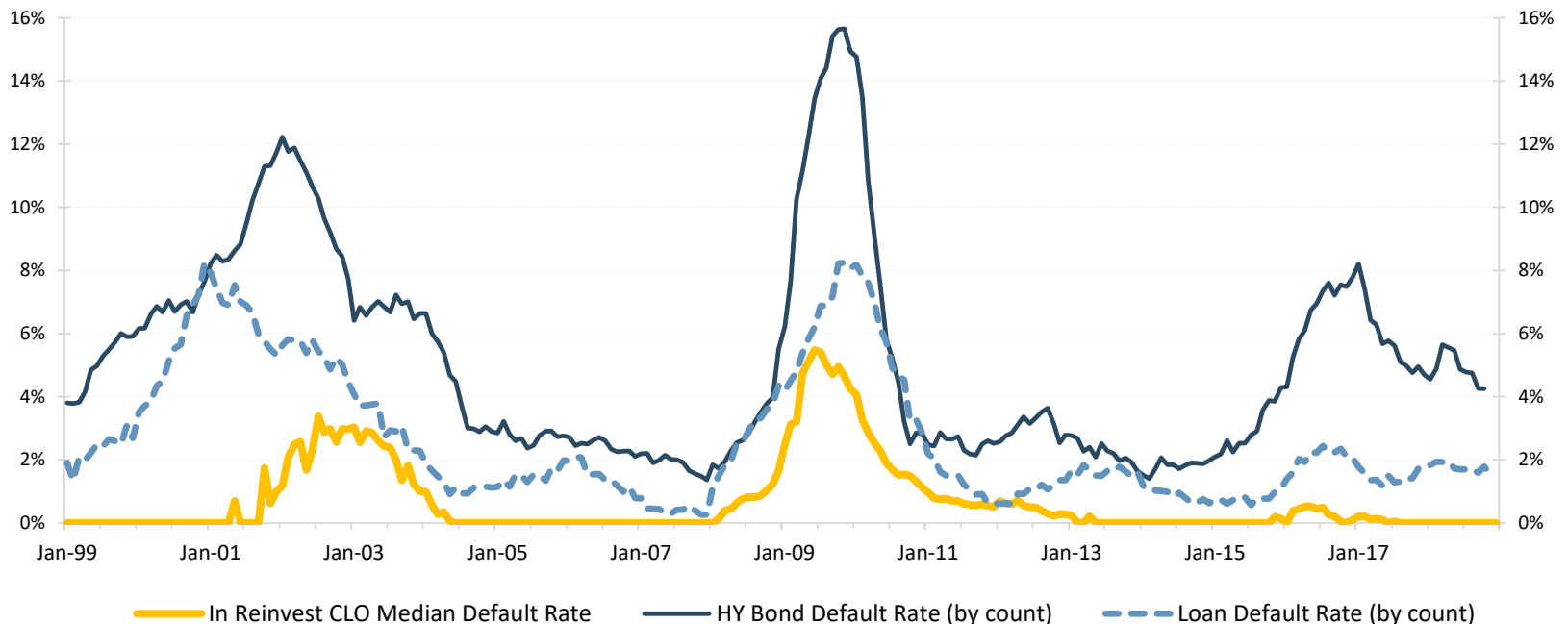
1. Source: Deutsche Bank Research. Represents U.S. CLO investor base as of November 2018.

Credit Performance of Loans in CLO Securities vs. the Market

Loans within CLO Securities have generally experienced fewer defaults than the Loan and High Yield markets, particularly through the Great Financial Crisis

- We believe Loans held within CLO Loan Portfolios have performed better as a result of credit selection and active portfolio management by the Loan Manager

Default performance of Loans within CLO Securities vs. the Loan and High Yield markets



Past performance is not indicative of future results.

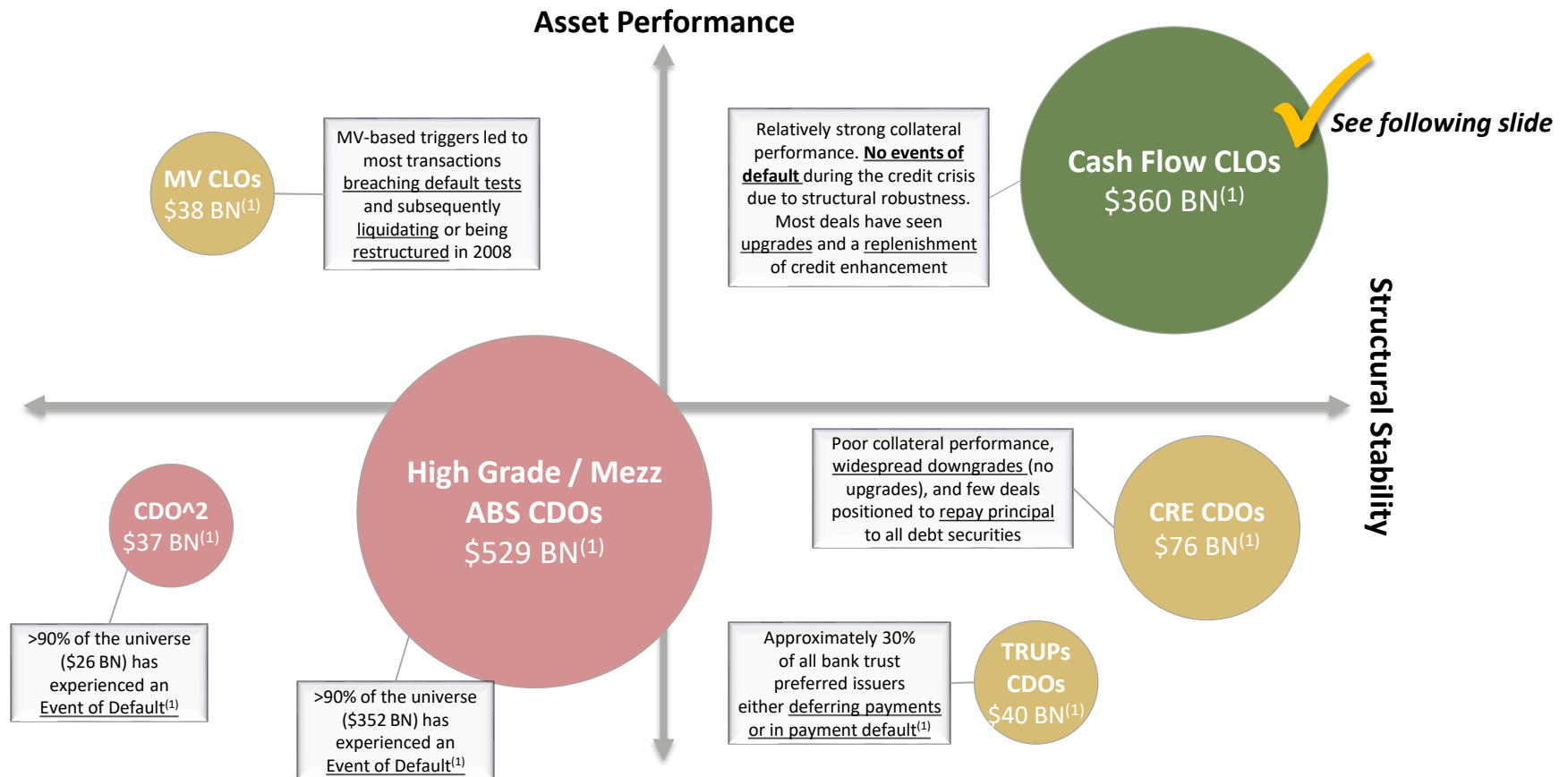
Note: Great Financial Crisis is defined as the period just prior to and following the credit market dislocation of 2008.

Source: Wells Fargo. "Loan Default Rate" per S&P LCD, represents the trailing 12-month default rate of all loans in the S&P/LSTA Leveraged Loan Index by count; "HY Bond Default Rate" per Moody's Investors Services, represents the issuer-weighted trailing 12-month default rate of spec-grade U.S. bonds; "In Reinvest CLO Median Default Rate" per Wells Fargo, represents the median percentage of defaulted loans held within reinvesting CLOs at each point in time.



Dispelling Myths about CLO Securities: “Didn’t they all blow up?”

Cash Flow CLO Securities have performed remarkably well for two decades with no defaults, including through the Great Financial Crisis – in stark contrast to CDOs and Market Value CLOs



Past performance is not indicative of future results. Note: Great Financial Crisis is defined as the period just prior to and following the credit market dislocation of 2008.

1. Source: Intex, Wachovia, Citi CDO Research: “CLO Equity – A Time-Tested, Well Performing Asset Class,” July 2010.

“ABS” refers to Asset-Backed Securities, which are securities backed by the cash flows of a portfolio of debt. “CDOs” refers to Collateralized Debt Obligations, which are backed by the cash flows of various interest-bearing debt instruments such as commercial real estate loans (“CRE CDOs”), trust preferred securities (“TRUP CDOs”), tranches of other CDOs (“CDO^2”), and CLOs. “MV CLOs” refers to CLOs that are structured where performance is dependent on the market price volatility and liquidity of the underlying portfolio rather than from cash flows generated by the underlying portfolios as in Cash Flow CLOs.



Very Low Default History of CLO Securities

The historical default experience of CLO Securities has been minimal to near zero over two decades

- S&P cites a very low historical U.S. CLO default rate of **0.41%** over nearly two decades; however, we believe even this low default rate is inflated since it captures a number of defaults caused by market value provisions or CLO Securities that were not predominately comprised of Loans

S&P U.S. CLO Default History By Rating (1994-2013) ⁽¹⁾				
Original Rating	Total Tranches	Defaulted Tranches	Default Rate	Loss Rate
AAA	1,992	0	0.00%	0.00%
AA	1,005	0	0.00%	0.00%
A	1,119	5	0.45%	0.08%
BBB	1,069	3	0.28%	0.21%
BB	841	14	1.66%	0.78%
B	115	3	2.61%	1.13%
Total	6,141	25	0.41%	0.04%

Past performance is not indicative of future results.

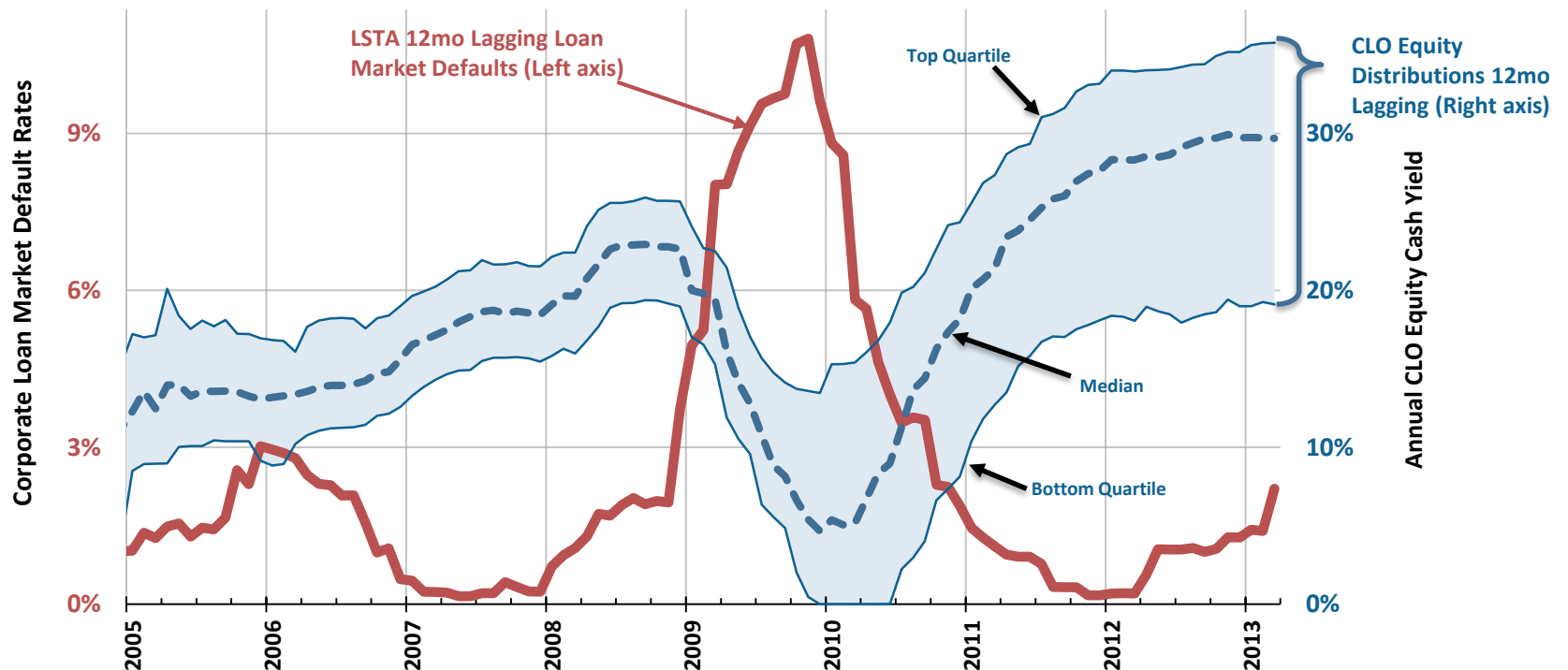
- Source: S&P LCD. "Twenty Years Strong: A Look Back at U.S. CLO Ratings Performance From 1994 Through 2013," January 31, 2014. Includes all U.S. cash flow CLO tranches ever rated as of year-end 2013. Default rate = number of ratings that had ratings lowered to D / total number of ratings. Loss Rate = sum of losses divided by sum of issuance amounts; market values from trustee reports used to estimate tranche losses when necessary; tranches without available loss data excluded.



CLO Equity Performance During the Great Financial Crisis

While CLO Equity cash flows were impacted by Loan defaults during the Great Financial Crisis, the median U.S. CLO continued to make current distributions to CLO Equity through the peak of the stress

U.S. CLO Equity Cash Flow Performance vs. Loan Market Defaults



Past performance is not indicative of future results. Note: Great Financial Crisis is defined as the period just prior to and following the credit market dislocation of 2008. Source: S&P LCD, Intex, Ares *INsight* database. LSTA refers to the Loan Syndications & Trading Association.



CLO Equity Performance – Current Default Scenario Analysis

If a representative CLO Loan Portfolio were to incur 2x the default rate experienced by Loans held in CLOs in 2007-2011, the CLO Equity would return a 4.0% IRR

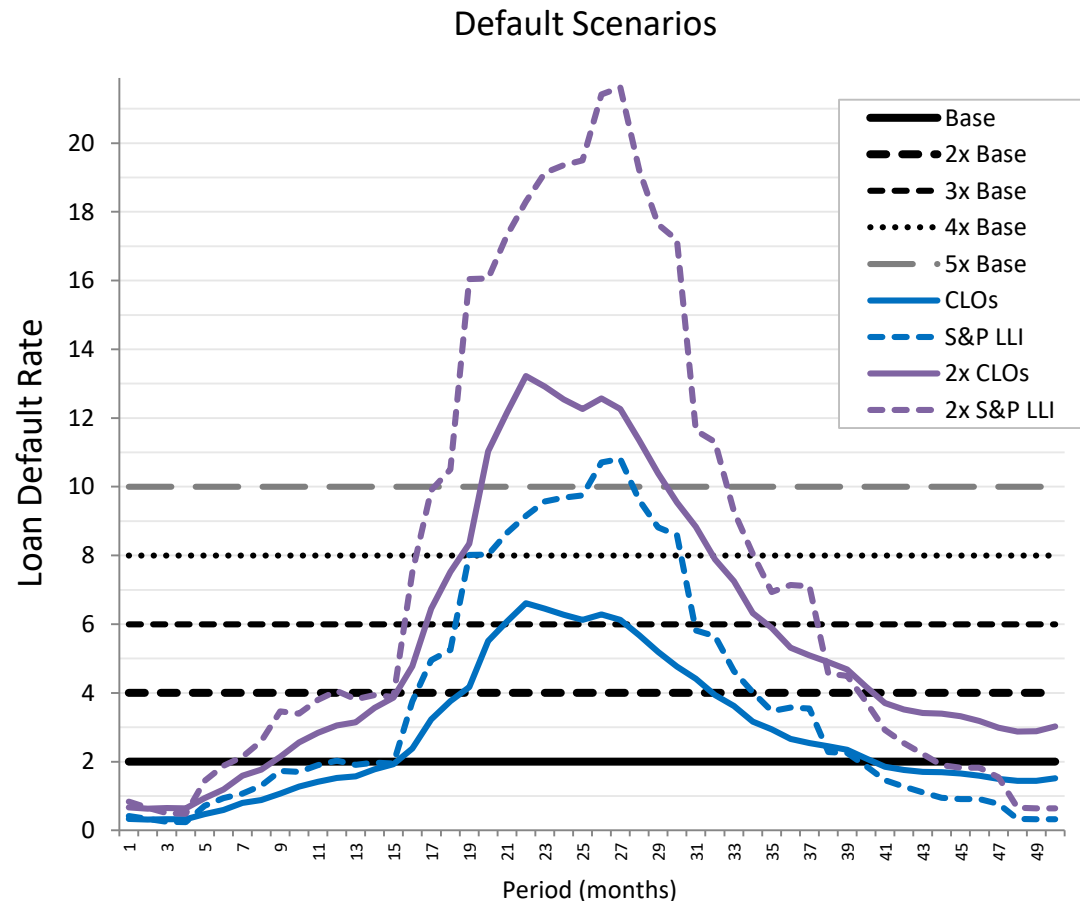
<u>Default Scenario</u>	<u>Loss-Adjusted IRR</u>
Base Case (2% CADR)	14.6%
2x Base Case (4% CADR)	9.2%
3x Base Case (6% CADR)	2.1%
4x Base Case (8% CADR)	-5.2%
5x Base Case (10% CADR)	-14.5%
2007-2011 Loans in CLOs	12.2%
2007-2011 2x Loans in CLOs	4.0%
2007-2011 S&P LLI	11.4%
2007-2011 2x S&P LLI	-3.8%

Scenarios stressed loan defaults

No credit was given to higher spreads or lower loan prices for reinvestment in a distressed loan market

No credit was given to CLO manager trading activity

No credit was given to the exercise of equity options (including refi, reset or call)



Source: Ares. Based on a representative 2018 vintage CLO.

Please refer to slide 21 for scenario assumptions. This information is shown for illustrative purposes only. There can be no assurance that investors will experience results equal to the scenarios presented herein. Any investment involves risk, including the potential loss of principal.



Conclusion

Summary

- The CLO market has grown at a similar rate as the overall Loan market
- Loan default rates within U.S. CLOs generally are well below those of Loans and bonds broadly
- Minimal to no cash flow CLO defaults have occurred throughout the 20+ year history of the asset class⁽¹⁾
- Assuming Loans default at 2x the rate of Loans held within CLOs during the Great Financial Crisis, the most junior tranche of CLOs (i.e. equity) would still generate a positive 4.0% IRR
- We find that concerns over lower recoveries caused by ‘cov-lite’ loans to be exaggerated because they fail to account for several mitigating factors, including:
 - Asset security and the senior position that first-lien loans enjoy matter more than covenants, and always have
 - Credit discipline and fundamental credit risk underwriting are critical factors in loss mitigation, and always have been
 - We expect today’s cohort of loans will deliver a range of performance outcomes based on all of these factors. Covenant terms are certainly one of these factors, but we consider the other factors to be more important

Past performance is not indicative of future results. Note: Great Financial Crisis is defined as the period just prior to and following the credit market dislocation of 2008.

1. While S&P cites a very low historical U.S. CLO default rate of 0.41% over nearly two decades, we believe this default rate is inflated since it captures a number of defaults caused by market value provisions or CLO Securities that were not 100% comprised of Loans.

Notes



Notes to Slide 18

Scenario analytics were conducted using INTEX. These materials contain "forward-looking" information that is not purely historical in nature, and such information may include, among other things, projections, forecasts or estimates of cash flows, yields or returns, scenario analyses and proposed or expected portfolio composition. The forward-looking information contained herein is based upon certain assumptions about future events or conditions and is intended only to illustrate hypothetical results under those assumptions (not all of which will be specified herein). Not all relevant events or conditions may have been considered in developing such assumptions. The success or achievement of various results and objectives is dependent upon a multitude of factors, many of which are beyond the control of Ares. No representations are made as to the accuracy of such estimates or projections or that such projections will be realized. Actual events or conditions are unlikely to be consistent with, and may differ materially from, those assumed. The results above do not reflect actual client trading. Ares does not undertake any obligation to publicly update or review any forward-looking information, whether as a result of new information, future developments or otherwise, except as required by law. All investments involve risk, including possible loss of principal.

- *All scenario analysis was performed using INTEXcalc. Cash flow projections based on a 2018 vintage CLO which Ares believes to be representative of deals in the market.*
- *All projections are based on forward LIBOR rates. All interest rates are as of January 18, 2019.*
- *Certain tranches are currently trading at prices assuming a near-term reset of the liabilities – the override prices reflect pricing without this assumption for purposes of calculating stressed returns (vs. option value).*
- *Loan default rates are graphically illustrated as either a constant default rate (CADR) or a vector of monthly defaults.*
- *Recovery rates are assumed to be:*
 - *first lien loans: 80%*
 - *second lien loans or high yield bonds: 30%*
 - *currently defaulted loans at the lower of the above recovery rates or the current bid price of the loan as reported by Intex*
- *Recoveries are assumed to be realized with a six-month lag. Recovery 'cash' is assumed to be reinvested during the month in which is received (vs. available as cash to cure tests).*
- *Loans are assumed to prepay at a rate of 20% per year.*
- *During the reinvestment period, principal is assumed to be reinvested into new loans with a 6yr maturity, L+3.50% coupon at a price of 99.50. Highly restricted reinvestment activity was assumed to occur during the first year following each CLO's reinvestment period.*
- *CLO was assumed to be unwound / liquidated 12 months following the end of the reinvestment period.*

 ARES
