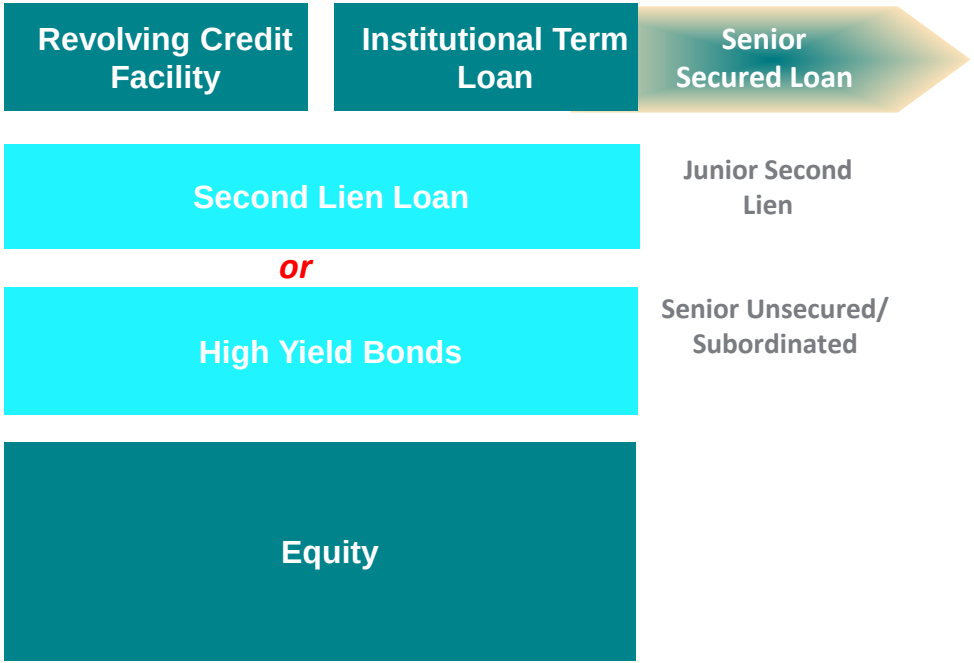
The U.S. Syndicated Loan Market

Trends in Credit Cycles and Systemic Risks

Introduction to Loans and CLOs

What are Leveraged Loans?

Corporate Capital Structure



Senior Secured Loans

Senior
- Senior-most debt obligations in capital structure of non-investment grade companies
- Repaid before other debt obligations and equity holders

Secured
- Secured by collateral, generally a company's assets or stock
- Higher Recovery Value if company defaults

Floating Rate
- Pays a base rate (historically LIBOR) plus an additional spread
- Coupons adjust in conjunction with changes in short-term interest rates
- Attractive yields

Covenants/Other
- Always benefit from Incurrence covenants
- Normally rated by Rating Agency's

Source: Credit Suisse

Who have been borrowers of U.S. Leveraged Loans?

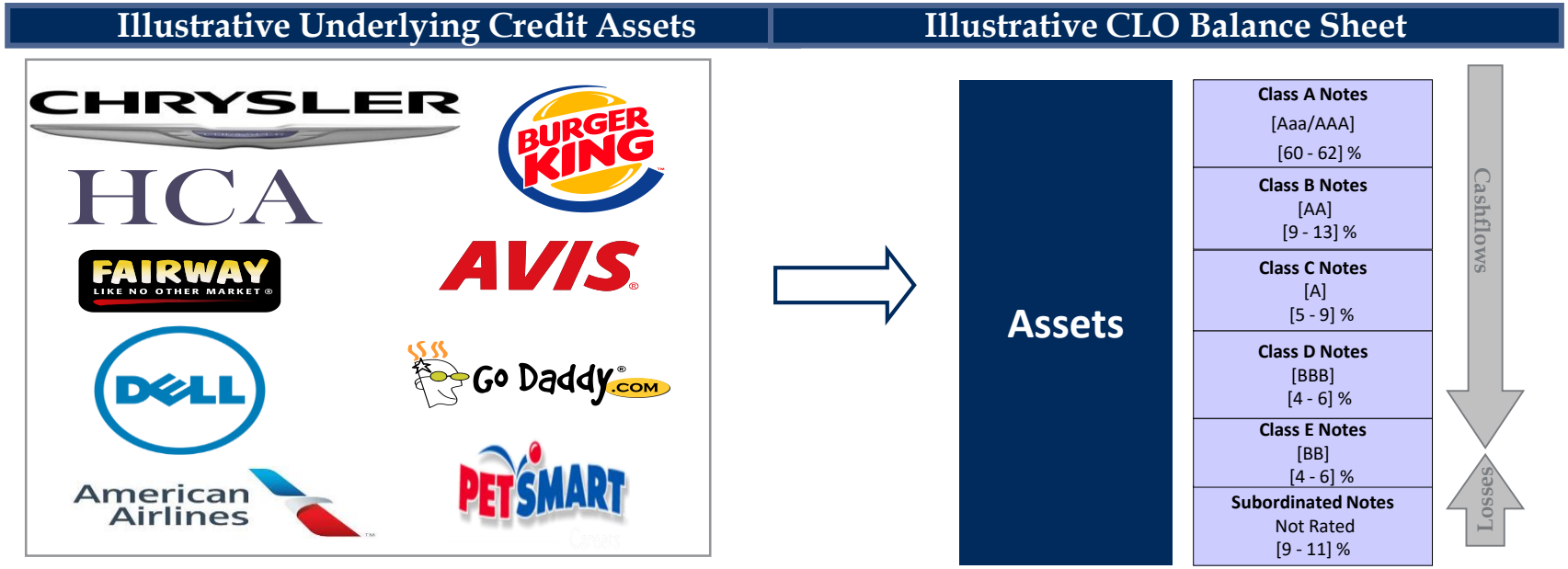
Note: The logos on this page are trademarks and service marks belonging to the respective companies shown above

What are “Institutional” Term Loans and Who Invests in Them?

- Part of a “leveraged loan”
- A term loan that:
  - Is drawn at inception
  - Has minimal amortization
  - Is repaid at maturity (or pre-paid before maturity)
  - Typically has 6-7 year maturity
  - Is usually callable at par at any time
- Also called “Term Loan B” or TLB

- Who are Institutional Investors?
  - Pension funds
  - Insurance companies
  - Sovereign wealth funds
  - Private wealth funds
  - Trust companies
  - Family offices
  - Asset managers

How a CLO Works: Transparent Portfolio of Loan Assets That Support CLO Debt and Equity



- CLOs invest in pieces of loans to mostly well-known U.S. and international companies
- The interest and principal of the loans pay the interest (and principal) of the CLO notes, starting at the AAA notes and working the way down the waterfall
- If there are losses on loans from defaults, those losses impact the equity holdings first

Investments in CLO are Reasonably Transparent – and Very Safe at the AAA Level

- Within the bank universe, both U.S. banks and Japanese banks have significant investments in CLOs.
- Japanese banks hold roughly $80 billion of outstanding CLO notes, while. U.S. banks hold roughly $90 billion of U.S. CLO notes.
- There remains transparency with who holds CLOs.

Banks with collateralized loan obligations as of March 31, 2019

	Structured financial products backed by corporate or similar loans				
			Total		
Company (top-level ticker)	Available for sale (fair value) ($M)	Held to maturity (cost basis) ($M)	($M)	Change since Q4'18 (%)	Change since Q4'18 ($M)
Wells Fargo & Co. (WFC)	34,560.0	60.0	34,620.0	0.0	11.0
JPMorgan Chase & Co. (JPM)	20,453.0	0.0	20,453.0	7.9	1,489.0
Citigroup Inc. (C)	12.0	18,061.0	18,073.0	-3.2	-603.0
Stifel Financial Corp. (SF)	1,311.4	2,799.2	4,110.6	-1.0	-41.7
Bank of New York Mellon Corp. (BK)	3,373.0	0.0	3,373.0	0.3	9.0
TD Group US Holdings LLC (TD)	2,282.8	0.0	2,282.8	0.5	10.7
MUFG Americas Holdings Corp. (8306)	1,538.4	0.0	1,538.4	4.3	64.1
State Street Corp. (STT)	1,512.0	0.0	1,512.0	23.6	288.2
BankUnited Inc. (BKU)	1,220.2	0.0	1,220.2	-1.2	-15.0
PNC Financial Services Group Inc. (PNC)	938.9	100.0	1,038.9	-3.2	-34.1
Banc of California Inc. (BANC)	1,035.7	0.0	1,035.7	-27.1	-385.8
Synovus Financial Corp. (SNV)*	510.3	0.0	510.3	NA	510.3
First Financial Bancorp. (FFBC)*	161.0	0.0	161.0	NA	161.0
Pinnacle Financial Partners Inc. (PNFP)	113.4	0.0	113.4	-48.1	-105.3
Webster Financial Corp. (WBS)	111.6	0.0	111.6	-1.0	-1.1
Bank of America Corp. (BAC)	56.0	0.0	56.0	-1.8	-1.0
BMO Financial Corp. (BMO)	32.8	0.0	32.8	1.1	0.4
United Community Banks Inc. (UCBI)	16.6	0.0	16.6	-74.0	-47.1
Group total	**69,239.0**	**21,020.2**	**90,259.2**	**1.5**	**1,309.4**

Data compiled June 13, 2019.
CLO = collateralized loan obligation; NA = not applicable
Based on regulatory filings.
Analysis based on all currently operating top-tier bank holding companies that filed Form Y-9C reports for the period ended March 31, 2019.
Total CLOs represent data reported in Schedule HC-B of the Form Y-9C filing under the field "Structured financial products supported predominantly by corporate and similar loans." The instructions for the Form Y-9C state that structured financial products "generally convert a pool of assets (such as whole loans, securitized assets, and bonds) and other exposures (such as derivatives) into products that are tradable capital." Instructions state that holding companies should exclude securities backed by loans that are commonly regarded as asset-backed securities rather than collateralized loan obligations in the marketplace.
Total CLOs calculated as the sum of available-for-sale structured financial products backed by corporate or similar loans held at fair value and held-to-maturity structured financial products backed by corporate loans or similar loans held at cost.
* Percentage change not applicable, as company did not report any CLO holdings for the period ended Dec. 31, 2018.
Source: S&P Global Market Intelligence

Source: LCD

CLO Investments are Very Transparent: Top 50 Holdings in US CLOs

Rank	Issuer	Approx. Amount ($Bils.)*
1	Asurion LLC	4.32
2	Transdigm Inc	3.58
3	Dell International LLC	2.95
4	Centurylink Inc	2.94
5	Altice France Est [Altice Blue One SAS]	2.35
6	Envision Healthcare	2.33
7	Refinitiv (Financial & Risk Us Holdings, Inc.)	2.30
8	SS&C Technologies Inc	2.29
9	Univision Communications Inc	2.10
10	Sprint Communications Inc	2.09
11	Scientific Games Corp	2.09
12	Albertson's Inc	2.07
13	Charter Communications Inc	2.02
14	Micro Focus International Plc	2.02
15	Starfruit Finco BV	2.00
16	Johnson Controls International Plc	1.98
17	Air Medical Group Holdings Inc	1.96
18	CSC Holdings Inc	1.96
19	Bass Pro Shops	1.95
20	Berry Global Group Inc	1.85
21	American Airlines	1.83
22	Caesars Resort Collection LLC	1.83
23	Royalty Pharma	1.81
24	Change Healthcare Holdings LLC	1.77
25	West Corp	1.75

Rank	Issuer	Approx. Amount ($Bils.)*
26	Lifepoint Hospitals Inc	1.74
27	Calpine Corp	1.72
28	Brookfield Wec Holdings Inc	1.67
29	EG Group [ex-Euro Garages Ltd]	1.66
30	First Data Corp	1.65
31	Virgin Media	1.65
32	ADT Corp	1.64
33	BMC Software	1.60
34	McAfee	1.57
35	Bausch Health Companies Inc	1.54
36	RCN Grande	1.53
37	Tempo Acquisition LLC	1.53
38	Misys Plc	1.52
39	Verscend Technologies	1.50
40	Endo International Plc	1.50
41	Amneal Pharmaceuticals LLC	1.47
42	Internet Brands Inc	1.45
43	Brand Energy & Infrastructure Services	1.45
44	Commscope Inc	1.45
45	Advantage Sales & Marketing	1.44
46	IMG Worldwide	1.43
47	DTZ US Borrower LLC	1.40
48	Nexstar Broadcasting Group	1.40
49	Rackspace Hosting	1.38
50	Formula One Administration Ltd [Foa]	1.37

Source: LPC CLO Intelligence

Lifecycle of a CLO

Pre-pricing	•The manager and the arranger determine the key features of the deal, and start negotiations with initial investors. The manager starts to identify and purchase assets, often with the use of a warehouse facility. This process starts up to several months before pricing.
Pricing	•Commitments are finalized and discount margins (or fixed coupons) for the liabilities are determined. Closing typically occurs two to four weeks later, at which point interest starts to accrue.
Ramp-up	•Usually, the manager does not have the full portfolio purchased by the time of pricing, and has a ramp-up period (six months is common) to purchase the remaining assets. Once the target portfolio size has been reached, the CLO passes the effective date, at which point various coverage and portfolio quality tests start to apply.
Non-call period	•CLO equity investors can exercise the rights to call a deal after a non-call period (typically 2 years for 2.0 deals). When calling the deal, equity investors repay the debt tranches at par, through refinancing proceeds or from the sale of the loan portfolio.
Refi/Reset	•Equity investors may be incentivized to refinance the debt tranches of the deal after the end of the non-call period to lower the cost of funding. In certain cases, they may make additional changes to the deal document such as extending the length of the reinvestment period.
Reinvestment period	•The CLO manager actively manages the loan portfolio during the reinvestment period (typically 4+ years for 2.0 deals), using loan principal repayments and asset sale proceeds to purchase new assets. CLO investors generally do not receive principal payments during this period as this cash is mostly reinvested in new assets.
Amortization (and call)	•Once the reinvestment period ends, most loan principal receipts are allocated to CLO liabilities, usually in strict sequential order. Often loan prepayments or the proceeds of sales of assets that the manager deems credit impaired or credit improved may still be reinvested. Equity investors often choose to call the deal at some point.

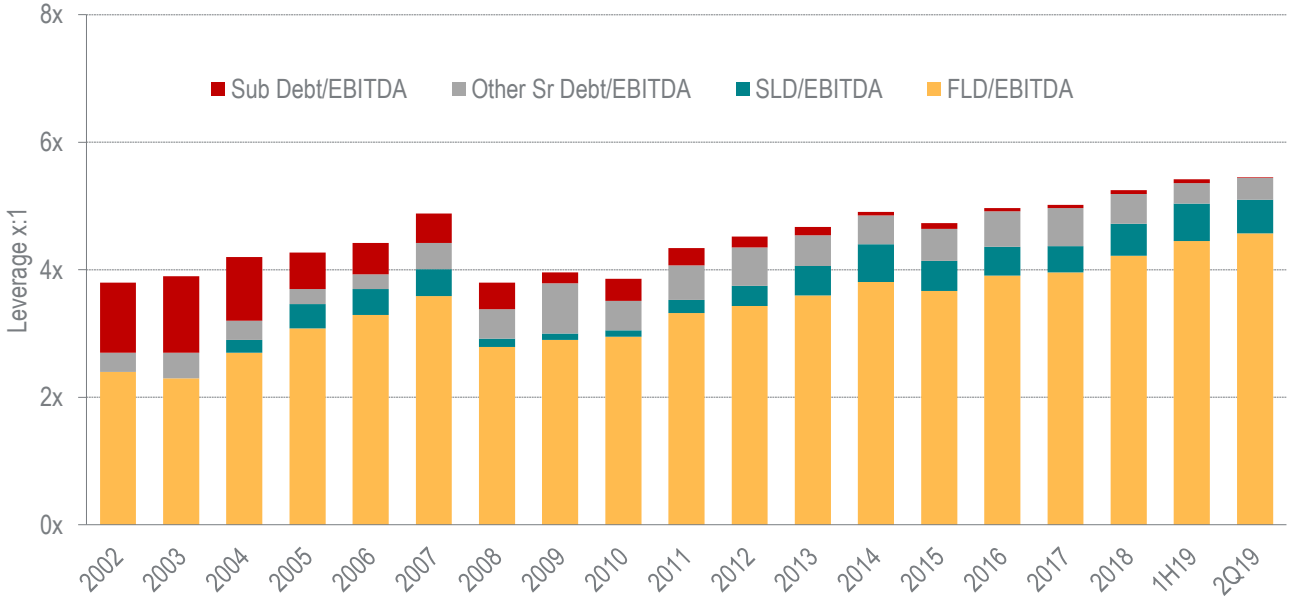
Measuring Risk in the Loan Market

Comparing 2007 and 2019

- The 2007 and 2019 leveraged loan markets are very different
  - Credit
    - Trend: In the tenth year of a recovery, most markets, including loans, have grown
    - State: Leverage has climbed, interest coverage is solid, covenants and protections are weaker
    - Impact: Future credit cycles may look similar or may see slightly higher loss experiences
  - Systemic
    - Trend: Since the Financial Crisis, systemic underpinnings of the market have improved
    - State: There is better pipeline management and less “mark-to-market” leverage (or “weak holders”) in the banking system
    - Impact: Future dislocations should be less severe

Credit Trends

Leverage Levels in “Highly Leveraged Transaction” Loans

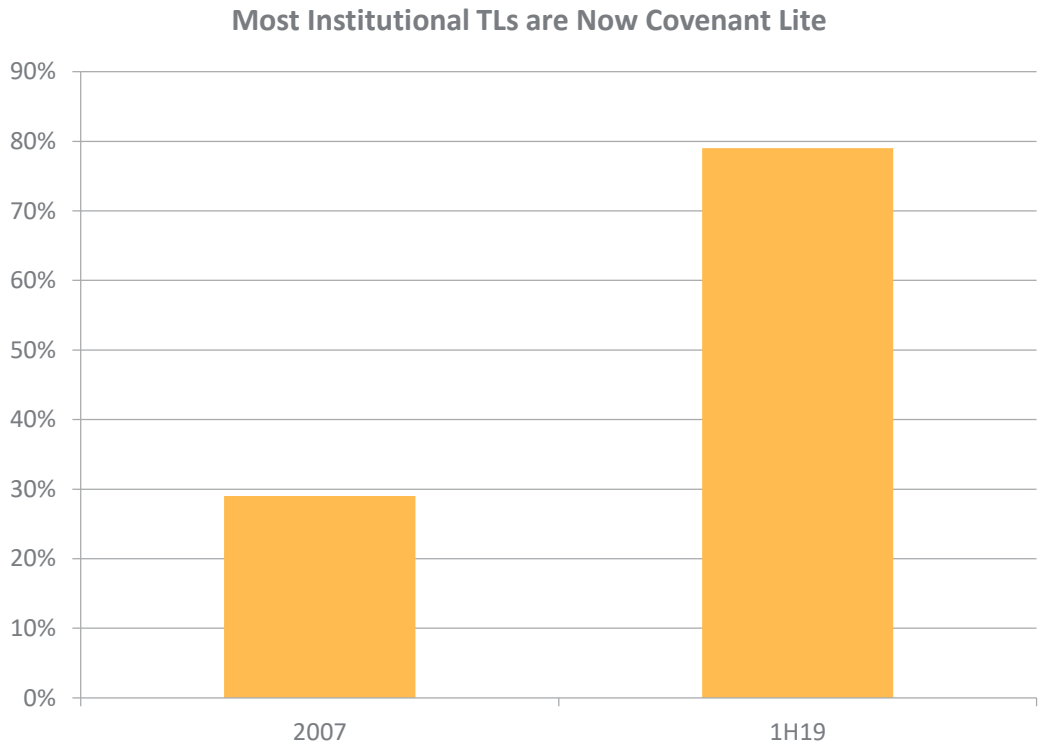


- Leverage has been increasing since post-crisis lows; subordinated bond debt has been declining
- However, there is greater use of second lien loan debt, which is structurally subordinated to traditional bank loans
- *HLT loans are priced > =L+250 through 1996, >= L+225 since then

Source: S&P/LCD

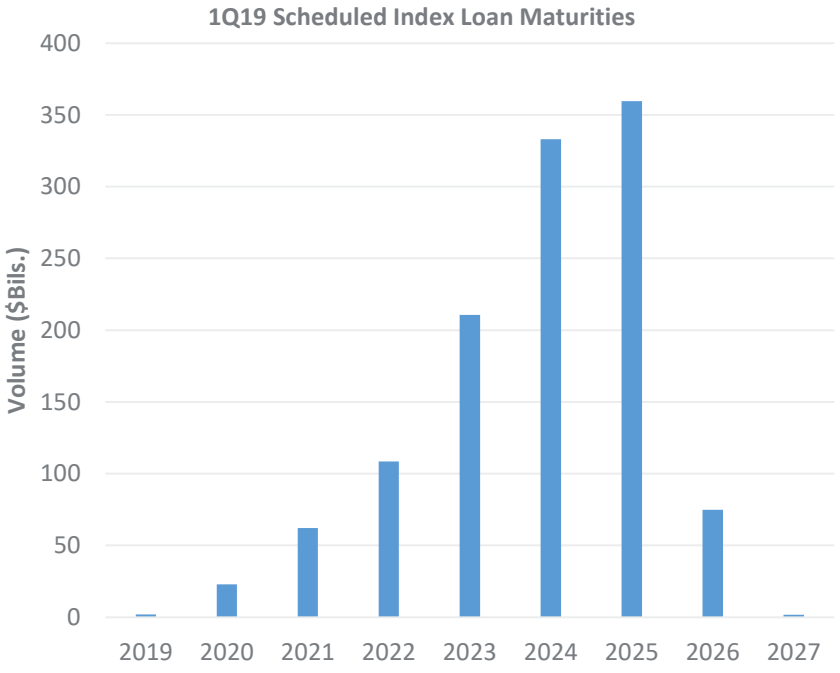
Credit Trends: Covenant Lite & Documentation

- Institutional term loans are “Covenant Lite” today. This simply means that the institutional tranche does not have maintenance covenants; they still have incurrence covenants and they usually are pari passu with a revolving loan that has maintenance or springing maintenance covenants. In addition, covenant lite loans still are senior-most in the capital structure and usually are secured by all the company’s collateral.
- There is debate as to whether covenant lite may actually reduce default rates or simply extend the credit cycle and potentially lead to lower Recovery Given Default (“RGD”)
- In addition to “covenant lite”, loan documents do see more EBITDA adjustments and incremental debt capacity now



Source: S&P/LCD

Credit Trends: Impact on Defaults



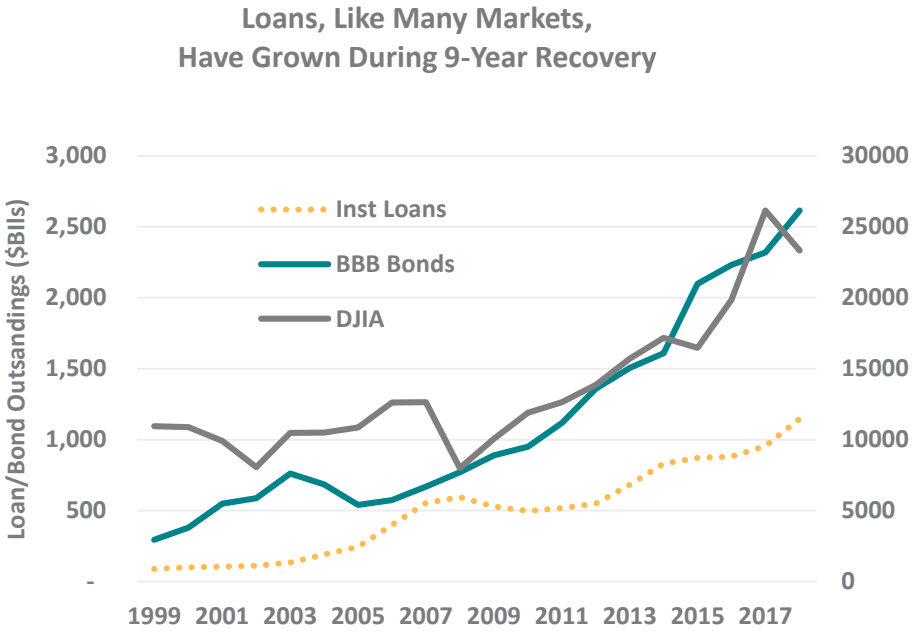
- **Background:**
  - What causes companies to default generally is either the inability to repay debt or inability to service debt
  - There is no evidence that companies are anywhere close to being unable to repay or service debt
  - Repayment ability: There are very few near-term loan maturities
  - Debt service ability: Interest coverage ratios – how much cash a company has to pay interest– remain strong

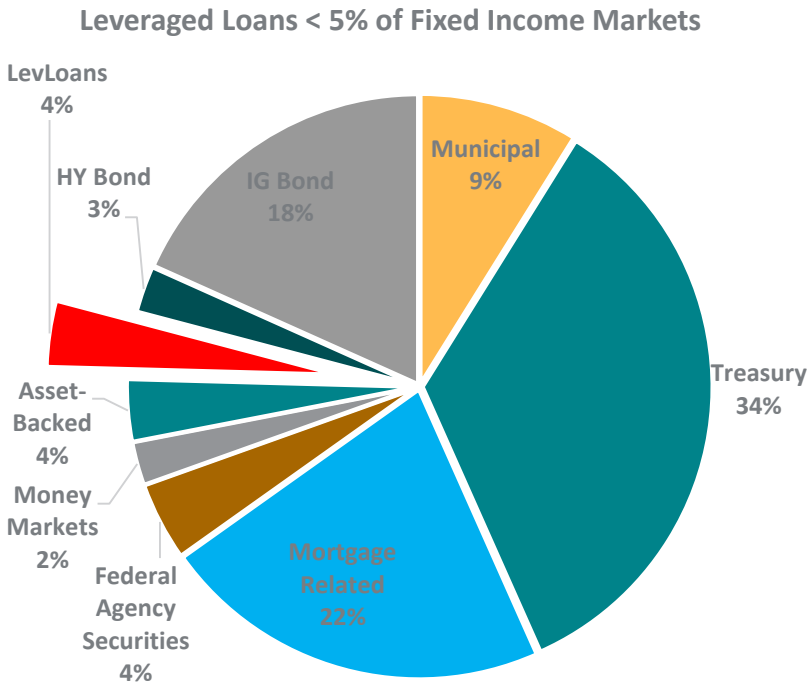
- **Repayment ability**
  - As the chart indicates, there are minimal leveraged loan debt maturities before 2022

Source: S&P/LSTA Leveraged Loan Index

Systemic Trends

Comparing Institutional Loans to Other Asset Classes





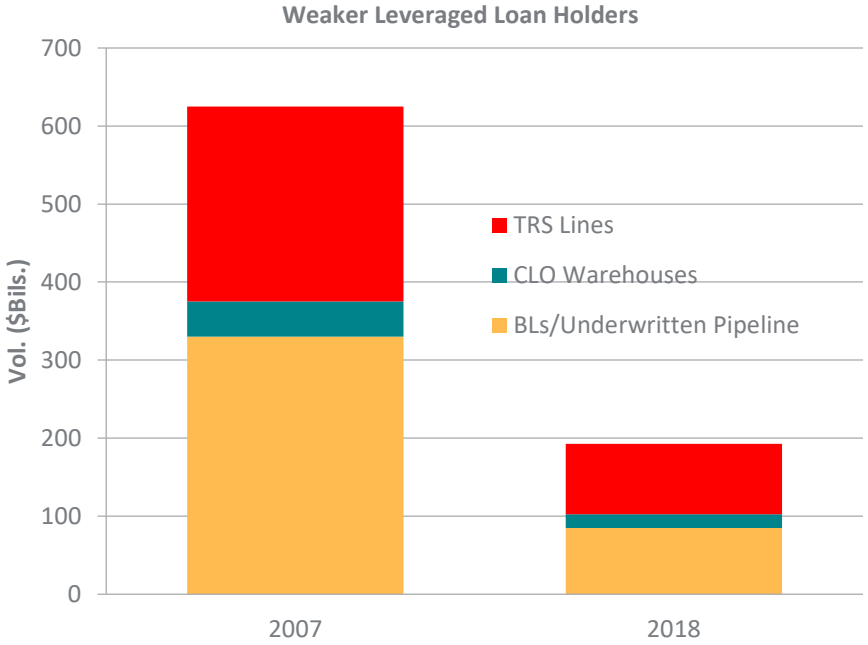
Source: SIFMA, Bloomberg, LSTA, Barclays, Yahoo Finance

Source: S&P/LCD

Comparing 2007 and 2019

- Systemic trends are very different
  - In 2007:
    - There was considerable exposure to “weak holders” – in other words, entities holding debt that could/would be forced to sell into a deteriorating market
    - These included Total Return Swap (TRS) Investors, Market Value (“mark-to-market”) CLOs, underwriting bank pipelines, and CLO warehouses
  - In 2019:
    - Bank pipeline management has become far more disciplined; despite higher total volumes, pipelines are less than one-third the size of pre-crisis levels
    - The investor base has shifted to long-term non-mark-to-market holders (like traditional CLOs). Meanwhile, entities such as Market Value CLOs and TRS Investors are all but defunct
  - Why this is critical:
    - Because of these systemic changes, even if default rates increase in a cyclical downturn, the impact on the market should be dramatically different
    - There will be few forced sellers, thus limiting the downside price risk
    - Long-term real money investors like traditional CLOs may use this opportunity to buy loans at attractive prices, thus stabilizing the market

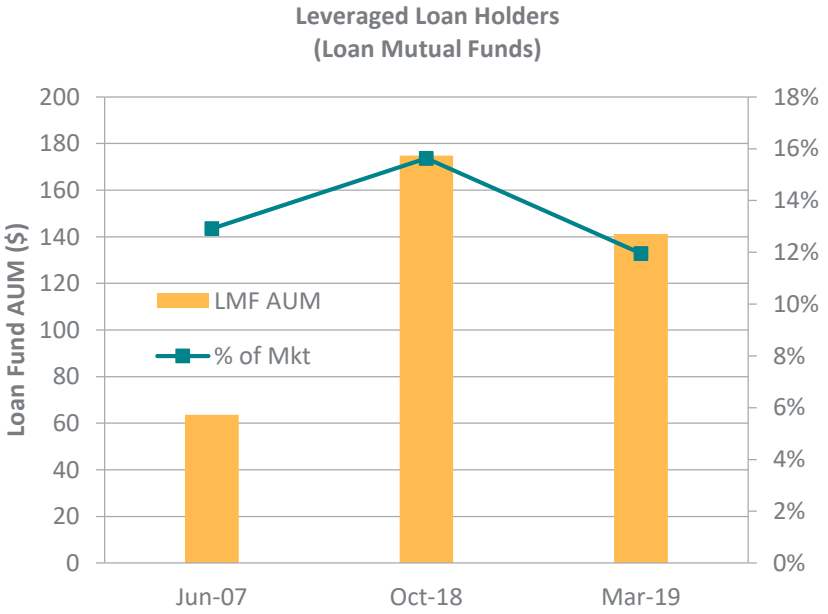
Systemic Trends: Far Fewer “Weak Hands” in Loan Market Today



- **In 2007, many of the leveraged loans were in “weak hands”, i.e., holders that may be forced to sell if markets deteriorated**
- **There are far fewer weak holders today**
- **Bank pipelines**
  - Prior to financial crisis, banks had large pipelines of leveraged loans
  - When the market froze, banks were unable to syndicate loans, and sold at deep discounts in a falling market; this accelerated a technically driven decline in the market
  - Bank pipeline management is more robust today, with pipelines generally less than 1/3 their peaks
- **Investors**
  - There are far fewer investors that would be forced sellers – such as TRS lines, market value CLOs and CLO warehouses

Source: PIMCO, JPM

Systemic Trends: LMFs Larger Today, but have Similar Market Share and Underwent 4Q18 Natural Experiment



- Loan Mutual Funds *are* larger today
- However
  - Similar market share as 2007
  - Approximately $20 billion of AUM is in closed end funds , thus 10% are in daily liquidity funds
  - LMFs are subject to Liquidity Risk Management Rule
  - Underwent natural experiment in December 2018 when redemptions hit 9% in one month
  - Despite much larger relative outflows than HY bonds, loans prices declined less or an equivalent amount to HY bonds
  - Managers used sales, cash on hand and higher "Highly Liquid Investment Minimum" (HLIM) to easily meet redemptions
  - *See appendix for details*

Source: Refinitiv LPC

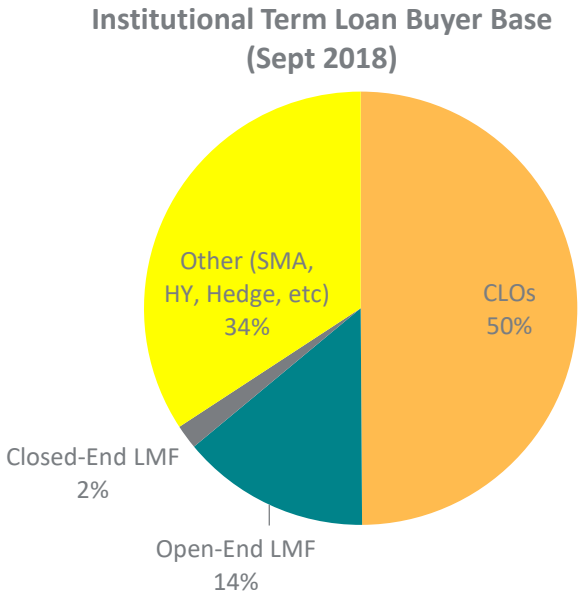
Appendix: Loan Mutual Fund Performance

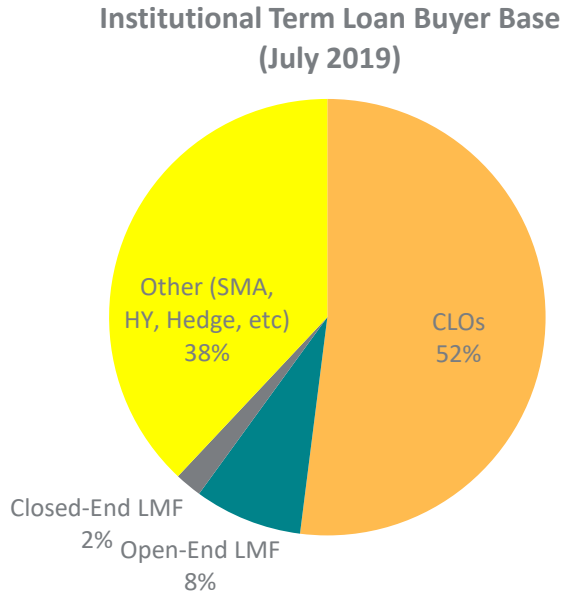
Loan and Loan Mutual Fund Performance in 2018

- Loan Market Performance & Trading Liquidity
  - Open-end loan mutual funds are 10-15% of the loan buyer base
  - Loan trading volumes increased during a volatile December 2018
  - Loan mutual funds experienced substantial absolute and relative outflows
  - Despite higher absolute and relative outflows, loan prices moved either less than or a similar amount as high yield bond prices

- Loan Mutual Fund Liquidity Management
  - Loan mutual fund managers experienced significant redemption requests
  - Redemptions were managed by a combination of selling loans and using cash on hand
  - We have found no evidence that managers needed to utilize their lines of credit
  - Loan mutual fund managers say that the December 2018 “natural experiment” validated their HLIM levels, HLIM warning levels and liquidity risk management plans

Institutional Term Loan Buyer Base

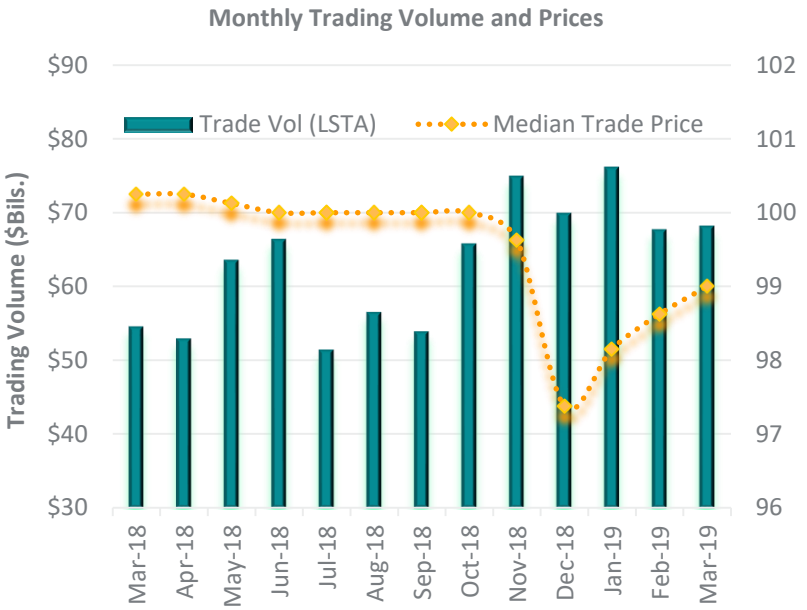


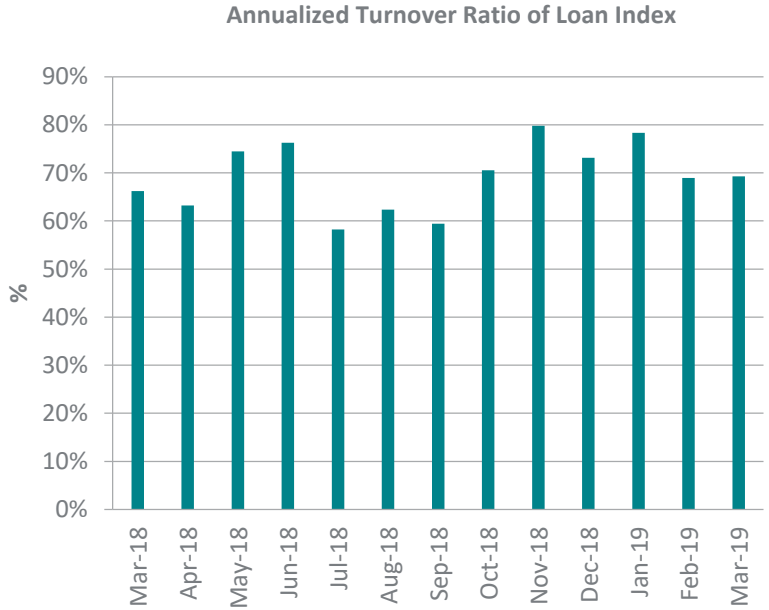


- Open-End LMFs are 8-15% of institutional term loan buyer base
- Open-End LMFs are subject to daily redemptions, nearly all other loan investors *are not*
- CLOs are match funded, most SMAs have periodic redemption rights with significant notice periods

Source: Refinitiv LPC

Loan Trading Trends

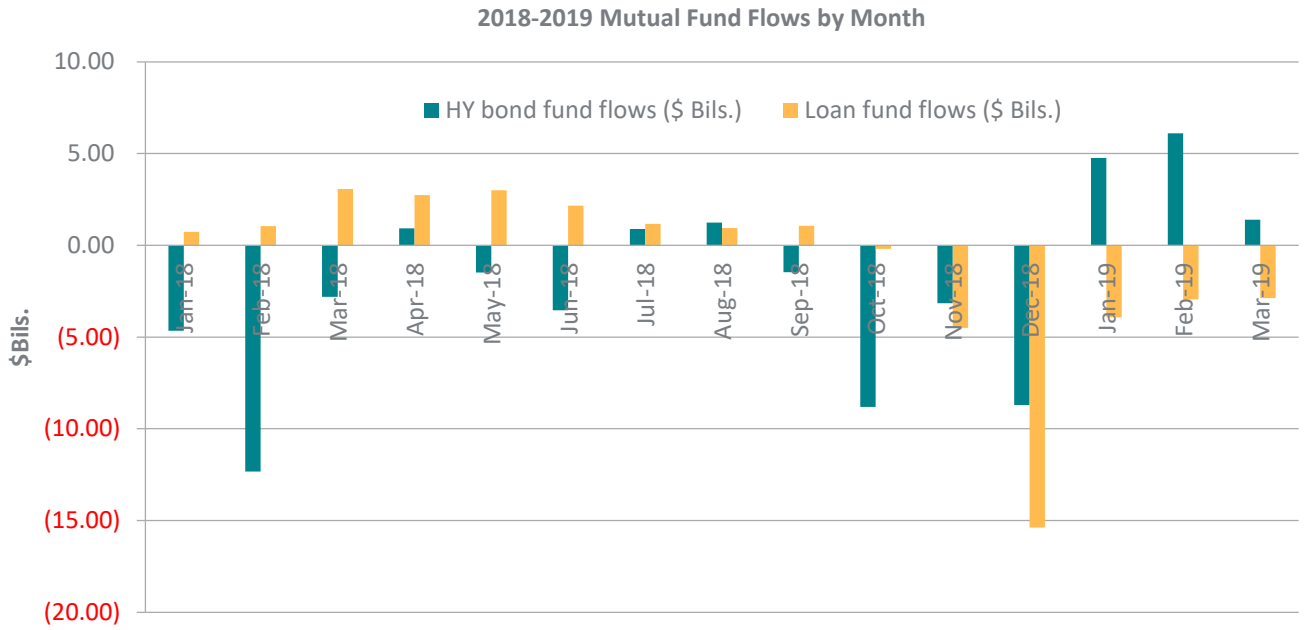




- Trading volume increased during downward price volatility (Dec 2018) and upward price volatility (Jan 2019)
- Turnover ratio trended up

Source: LSTA Trade Data Study

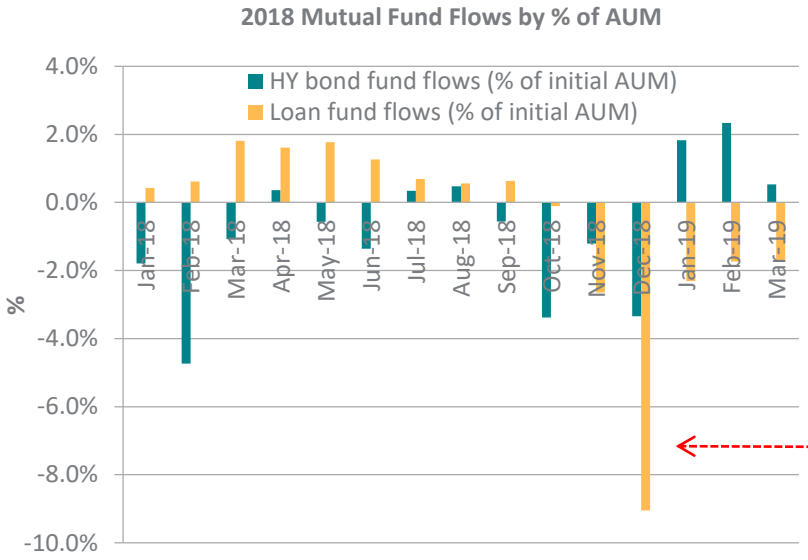
Absolute Loan Mutual Fund vs HY Bond Mutual Fund Flows

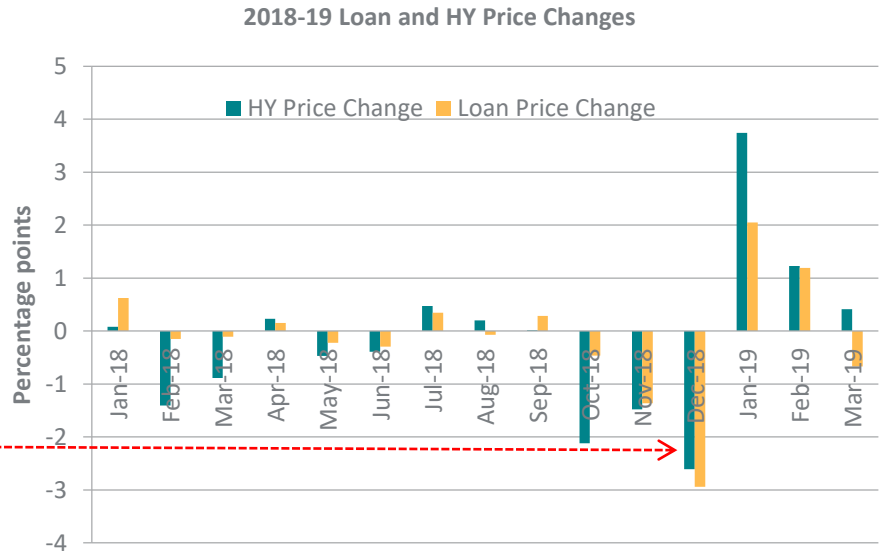


- Loan mutual fund flows turned sharply negative in 4Q18
- Outstripped HY bond mutual fund outflows on an absolute basis
- Loan funds are smaller than HY bond funds, so outflows even more significant on a relative basis

Source: Refinitiv LPC

Relative Fund Flows vs Price Changes





- Relative to Mutual Fund AUM, Dec 2018 outflows were much more severe in loans (-9%) than in HY bonds (-3.3%)
- However, loan price declines (-2.9 pts) were comparable to HY bond price declines (-2.6 pts)
- This, in combination with robust trading volumes, indicates that loan trading liquidity held up

Source: Refinitiv LPC, Barclays, BAML ICE Index, S&P/LSTA Loan Index, LSTA Calculations

Loan Mutual Fund Performance in 2018

- Loan Mutual Fund Liquidity Management
  - Loan mutual fund managers experienced significant outflows – more than 9% of AUM in December 2018 alone
  - How they managed it
    - Sold loans (and sometimes bonds) in anticipation of redemptions
    - Used cash on hand

- Impact of “natural experiment”
  - Managers say December 2018 validated their HLIM levels, warning levels and liquidity risk management plans
  - While lines of credit are an important part of their liquidity plans, there is no evidence that managers needed to utilize their lines of credit in December 2018