J.P.Morgan

North America High Yield
and Leveraged Loan Research
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2019 Leveraged Loan Annual Review

North America High Yield and Leveraged Loan Research

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See page 196 for analyst certification and important disclosures.

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2020 high-yield and leveraged loan outlook

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2020 high-yield and leveraged loan outlook

As originally published on December 6, 2019

- Despite providing double-digit gains in 2019, we remain optimistic on high yield and leveraged loans heading into 2020 given our expectation for an extension of the current muted economic cycle matched with only a limited rise in Treasury yields. In particular, our economists forecast one more Fed rate cut in 2Q20, whereas our rates strategists forecast only a modest increase in 10-year US Treasury yields to 2.05% by YE20. Even so, an abundance of concerns, ranging from late cycle dynamics to election uncertainty, and stretched historical valuations across fixed income are not likely to subside. That said, our colleagues' relatively benign forecasts for the global economy, rates, and stock prices suggest high yield bonds and leveraged loans can manage to outperform the majority of fixed income. We are forecasting tighter HY spreads of 440bp by YE20, absorbing all of the forecasted 20bp rise in 5-year Treasury yields and leading the YTW to decrease 20bp to 6.25%. This equates to another above-coupon full-year return of 7.50%.
- Leveraged loan performance has lagged in 2019 due largely to receding rate concerns and rising rating/sector dispersion. For 2020, a forecasted 20% year-over-year drop in CLO issuance by our strategists (from ~$120bn to $95bn) is expected to be offset by less severe retail loan fund outflows (vs $35bn YTD) and a balanced technical (i.e. capital market restraint akin to 2019). Our full-year 2020 return forecast for loans is 6.5%. In particular, we would advocate investors allocate towards B1 and B2 rated loans over Double B bonds, where the yield pickup is now 160bp and 260bp, or comfortably above an average yield differential of 75bp and 190bp since 2010.
- The US HY bond and loan default rates are up to 2.94% and 2.18%, which fall to only 1.28% and 1.52% ex-commodities. For reference, the long-term average HY bond and loan default rates are 3.46% and 3.07%. Going forward, we see very little reason to expect much of a pickup in default activity for the foreseeable future. Only a modest erosion in credit fundamentals across most sectors and the past few years' heavy pace of refinancing have balance sheets in a solid position. Meanwhile, capital markets should remain highly accessible in 2020 with the drag from global trade receding, US economic growth expected to stabilize, and monetary policy to remain accommodative. That said, an expected year-over-year decline in Energy defaults is likely to be replaced by the filing of one (or more) large distressed situation(s). Therefore, we are forecasting unchanged HY bond and loan default rates of 3.0% and 2.0% in 2020, which we expect will rise to 3.5% and 3.0% in 2021 as the cycle matures and more Energy defaults resurface.
- We believe low interest rates will continue to influence capital markets in 2020. We forecast gross high yield and institutional loan new issuance of $225bn and $275bn, respectively, down about 20% year over year. For net HY issuance, a forecasted $100bn would still be the 3rd lightest of the credit cycle (vs ~$90bn in 2019) and 40% below where it stood between 2013 and 2015. And for loans, we expect 2019's $300bn+ refinancing/re-pricing volume to decrease next year. Meanwhile net new loan volume of $175bn would be down 15% y/y following 2018's 10yr high of $300bn.

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2020 High Yield Bond and Leveraged Loan Outlook

Overview: Despite providing double-digit gains in 2019, we remain optimistic on high yield and leveraged loans heading into 2020 given our expectation for an extension of the current muted economic cycle matched with only a limited rise in Treasury yields. Less drag from global trade, the stabilization of oil prices, and the GM strike resolution should benefit US GDP growth in 2020. Meanwhile, our economists forecast one more Fed rate cut in 2Q20, whereas our rates strategists forecast only a modest increase in 5- and 10-year US Treasury yields to 1.75% and 2.05% by year-end 2020. Even so, we expect late cycle dynamics and uncertainty surrounding the US Presidential election to drive elevated volatility in rates and equities, which would negatively influence sentiment in high yield. We also expect a year-over-year decline in default activity in the Energy sector to be replaced by the filing of one (or more) large distressed situation(s). Therefore, we are forecasting unchanged HY bond and loan default rates of 3.0% and 2.0% in 2020, which we expect will rise to 3.5% and 3.0% in 2021 as the cycle matures and more Energy defaults resurface. That said, our colleagues' relatively benign forecasts for the global economy, rates, and stock prices suggest high yield bonds and leveraged loans can manage to once again outperform the majority of fixed income even if return opportunities are more limited.

We are forecasting tighter HY bond spreads of 440bp by year-end 2020, absorbing all of the forecasted 20bp rise in 5-year Treasury yields and leading the YTW to decrease 20bp to 6.25%. These conditions should produce a second consecutive year of above-coupon performance (7.5% in 2020E versus 11.5% in 2019E). Meanwhile, the forecasted 20% year-over-year drop in CLO issuance by our strategists (from ~$120bn to $95bn) is expected to be offset by less severe retail loan fund outflows (vs $35bn YTD) and a balanced technical (i.e. capital market restraint akin to 2019). Our full-year 2020 return forecast for loans is 6.5%, with the asset class expected to continue to provide superior low volatility exposure to a benign fundamental backdrop for credit. Meanwhile, we expect limited interest rate concerns to continue to influence capital markets. We are forecasting gross and net HY bond and loan new issuance of $225bn/$100bn and $275bn/$175bn. For bonds, this implies a drop in refinancing opportunities and a modest uptick in net activity. For context, a forecasted $100bn of net HY issuance would still be the third lightest of the credit cycle (vs. 2019's ~$90bn and $85bn in 2018) and 40% below where it stood between 2013 and 2015. For loans, net new activity is expected to continue to slide (~15% y/y) following the heaviest activity of the credit cycle in 2018.

Table 1: High yield bond and loan 2020 forecasts

	US High-Yield Bonds				US Leveraged Loans			
	2017	2018	YTD	2020E	2017	2018	YTD	2020E
Total Return	7.59%	-2.39%	11.30%	7.50%	4.25%	1.08%	6.96%	6.50%
Gross Issuance	$328.1bn	$187.4bn	$268.4bn	$225bn	$973.9bn	$703.7bn	$353.8bn	$275bn
Net Issuance	$120.4bn	$73.3bn	$86.2bn	$100bn	$258.3bn	$301.7bn	$187.3bn	$175bn
	YE '17	YE '18	3-Dec-19	2020E	YE '17	YE '18	3-Dec-19	2020E
Default rates	1.46%	1.89%	2.94%	3.00%	1.88%	1.74%	2.18%	2.00%
Yield	6.10%	8.23%	6.44%	6.25%	6.31%	8.13%	6.59%	6.50%
Spread	404bp	567bp	486bp	440bp	419bp	559bp	511bp	475bp

Note: Loan yields and spreads data are based on 3yr takeout period. High-yield bond yields and spreads are based on US HY Index.
Source: J.P. Morgan.

Macro: A nimble pivot by the Fed to provide easier financial conditions has supported an above-trend 2.1% growth outcome so far in 2019. Looking forward, our economists believe 4Q GDP growth will be a local trough, and—like the market—

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they are sanguine about the economy's chances of avoiding a recession next year. That said, they remain somewhat unconvinced that growth will accelerate in 2020. The fading of 2019's significant federal fiscal support should moderate growth to a trend-like 1.7% pace in 2020. Essentially, our forecast is for GDP growth in the US to continue on about the same path that it has for the past couple of years—neither too fast that it induces policy tightening nor too slow that it raises higher concerns about inflation. Meanwhile, ongoing trade policy uncertainty, coupled with what should be a contentious electoral season, should dampen any rebound in capital spending. But while the business caution evident this year may linger into next year, the consumer remains well positioned to keep spending. While we do not see any new expansionary fiscal initiatives next year, the path to cutting rates was made easier by the benign inflation backdrop. The limitations on the Fed's toolkit place a premium on acting preemptively. Without more monetary stimulus, our economists think the Fed's inflation credibility could be tested, and they pencil in one more ease in 2Q20. Additionally, our rates forecast includes modest curve steepening as the more upbeat macro outlook outlined above unfolds. In particular, 2-, 5-, and 10-year US Treasury yields are forecasted to end 2Q20 at 1.50%, 1.55% and 1.85% and 4Q20 at 1.60%, 1.75% and 2.05%.

Table 2: Macro Forecasts

J.P. Morgan interest rate forecasts	Actual (9-Dec-19)	19-Dec	20-Mar	20-Jun	20-Sep	20-Dec
Effective funds target	1.55%	1.55%	1.55%	1.30%	1.30%	1.30%
3-mo LIBOR	1.89%	1.90%	1.75%	1.50%	1.50%	1.65%
2-yr US Treasury	1.61%	1.55%	1.45%	1.50%	1.55%	1.60%
5-yr US Treasury	1.65%	1.55%	1.45%	1.55%	1.65%	1.75%
10-yr US Treasury	1.81%	1.70%	1.70%	1.85%	1.95%	2.05%

10-yr Global Gov't Yields	German	Japan	France	Spain	Italy
	-0.36%	-0.08%	-0.05%	0.41%	1.18%

J.P. Morgan crude oil price forecasts ($/bbl)	Actual (22-Nov-19)	19-Dec	20-Mar	20-Jun	20-Sep
Brent	63.39	67	63	58	59
WTI	57.77	62	58	53	55

GDP	% q/q, saar												
	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19E	1Q20E	2Q19E	3Q20E	2017	2018	2019E	2020E
United States	3.9	1.1	3.1	2	1.9	1.3	1.8	1.8	1.8	2.2	2.9	2.3	1.7
Japan	-2.5	1.8	2.2	1.8	0.2	-1.5	1	1.1	0.5	1.7	0.8	0.9	0.4
China	6	6.1	6.8	5.9	5.5	5.8	6.1	6	5.7	6.9	6.6	6.1	5.9
Euro area	0.6	1	1.7	0.8	0.9	1	1.3	1.5	1.5	2.5	1.9	1.2	1.2
EM	4	3.8	4.1	4.3	3.9	4	4.3	4.4	4.3	5.1	4.8	4.1	4.3

Source: J.P. Morgan.

Defaults: Default activity in 2019 has been above expectations due to stress in the energy sector, and we believe less activity in the energy sector in 2020 (particularly bonds) will be offset by the inclusion of one (or more) large distressed situation(s) (particularly bonds). Therefore, we are expecting comparable year-over-year default activity in 2020. There has been a total of $58.1bn of defaults ($50.3bn) or distressed exchanges ($7.8bn) in 2019 versus $39.1bn through YTD18. Sectors contributing by # include Energy (40%), Healthcare (8%), and Metals/Mining (8%). The US HY bond and loan default rates are up to 2.94% and 2.18%, which ex-commodities fall to only 1.28% and 1.52%. For reference, the long-term average HY bond and loan default rates are 3.46% and 3.07%. Going forward, we see very little reason to expect much of a pickup in default activity for the foreseeable future. Only a modest erosion in credit fundamentals and the past few years' heavy pace of refinancing across bonds and loans has balance sheets in a solid position. Meanwhile, capital markets

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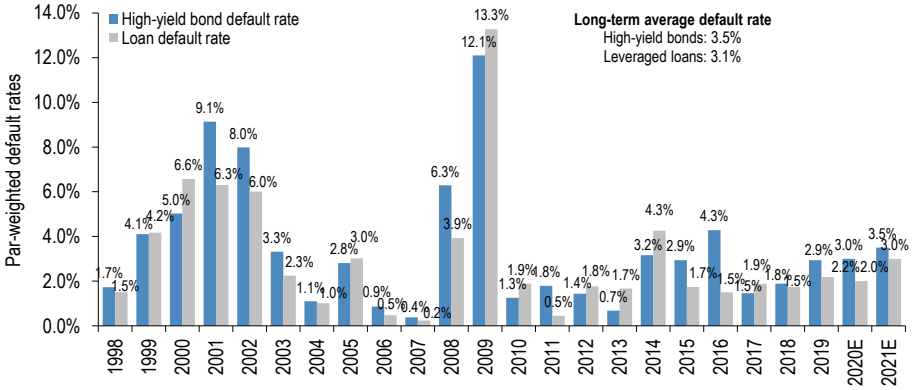
should remain highly accessible in 2020 with the drag from global trade receding, US economic growth expected to stabilize, and monetary policy to remain accommodative. And a multi-year high for distressed bonds and loans (i.e. sub $70 bonds, sub $80 loans) totaling $152bn is still well below where it stood in early 2016 ($345bn). For 2020 we expect high yield bond and loan default rates to remain about unchanged at 3.0% and 2.0%, respectively, which is below the 3.0-3.5% long-term averages. Meanwhile, we introduce an early forecast for 2021's high yield bond and loan default rates of 3.5% and 3.0%, respectively, a modest y/y increase for each as the cycle matures and more Energy defaults resurface (esp. drillers).

Figure 1: High yield bond and loan default rates are expected to remain unchanged at 3.0% and 2.0% in 2020



Source: J.P. Morgan.

New Issue: High yield bond issuance has been higher than expected in 2019 due to a resurgence of refinancing activity. On the one hand, a considerable decline in Treasury yields and receding macro stress has placed downward pressure on HY bond yields. This is particularly true for Double B and Single B issuers, where yields are 190bp lower year to date. Furthermore, reduced demand for floating rate product has shifted some activity out of the loan space. High yield new issue activity totals $267bn year to date or only $86bn ex-refi, up 43% and 18% over the same period a year ago. For context, net HY volumes are tracking about half of where they stood between 2013 and 2015 (range $165-$175bn per year). Meanwhile, YTD institutional loan issuance totals $354bn or $187bn or ex-refi/re-pricing. The 49% year-over-year decline in gross volume has been driven by the drop-off in re-pricing and refinancing activity, whereas net new institutional loan issuance (-36% y/y) is off last year's post-crisis high. Thus, on a net basis, leveraged credit volumes are down about 25% year over year at $274bn YTD, which is comparable to 2014's 10yr high $410bn. Given a forecast for one more Fed rate cut in 2020 and very little change in Treasury yields, we expect limited interest rate concerns will continue to influence capital markets. For 2020 we forecast high yield bond and institutional loan new issuance of $225bn and $275bn, respectively, or a combined $500bn. This assumption would have gross high yield and loan activity down about 20% year over year. For net new HY bond issuance, we expect a slight uptick in M&A volumes will translate into a $20bn y/y increase in full-year net new HY bond issuance to $100bn (55% refinancing versus 57% avg. between 2010-19'). For context, a forecasted $100bn of net HY issuance would still be the third lightest of the credit cycle after the past two years and 40% below where it stood between 2013 and 2015. We also expect 2019's $300bn+ of refinancing/re-pricing volume to decrease next year. Meanwhile, net new loan volume of $175bn would be down ~15% y/y following the heaviest activity of the credit cycle in 2018. And net leveraged credit volumes

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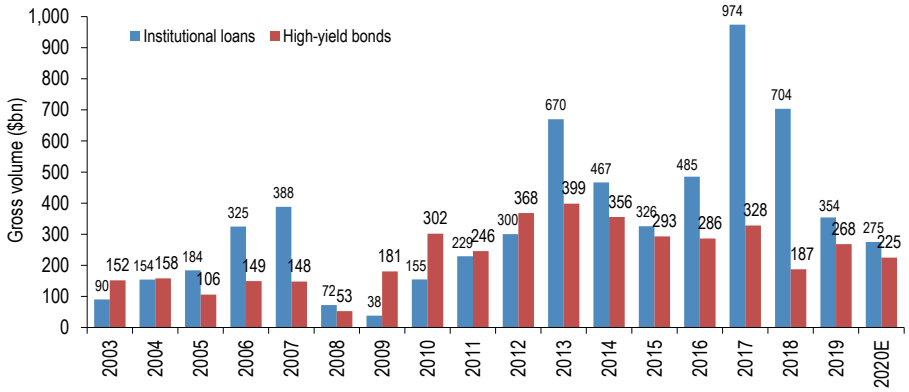
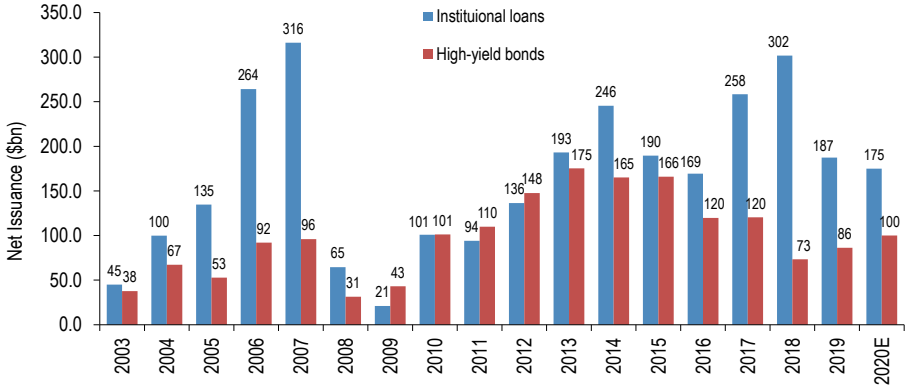
totaling a forecasted $275bn would be flat y/y and below 2014's 10-year high of $410bn.

Figure 2: High yield bond and loan gross new issue volume



Source: J.P. Morgan.

Figure 3: 2019 net high yield bond and loan volumes



Source: J.P. Morgan.

High Yield Performance Forecasts: High yield bonds are providing double-digit gains in 2019 amid sharply lower rates, better-than-expected earnings, the largest inflows since 2012, light net new issue activity, and outperformance among higher-quality issuers. Going forward, spread compression opportunities among decent credit quality issuers are limited. At the same time, global central banks are expected to pivot away from easing policy in 2020. Also, an abundance of concerns ranging from late cycle dynamics, to liquidity, to election uncertainty, and stretched historical valuations across fixed income are not likely to subside. That said, we continue to see HY bond spreads supported by the positive fundamental backdrop for most issuers. We are forecasting spreads of 440bp by year-end 2020, absorbing all of the forecasted 20bp rise in 5-year Treasury yields and leading the YTW to decrease 20bp to 6.25%. This equates to an above-coupon full-year return of about 7.50%, which we believe will outperform the majority of fixed income asset classes. The most likely upside driver to our forecast (i.e. ~10% total return) would originate from additional "insurance cuts" by the Fed (i.e. two or three versus one forecasted) and an unexpected decline in US Treasury yields as long as recession risks remain hereabouts. And given that the probability of a US contraction over the next twelve months is likely to remain low, we believe the more likely triggers of downside risk would include a more aggressive Federal Reserve, a more substantial than expected

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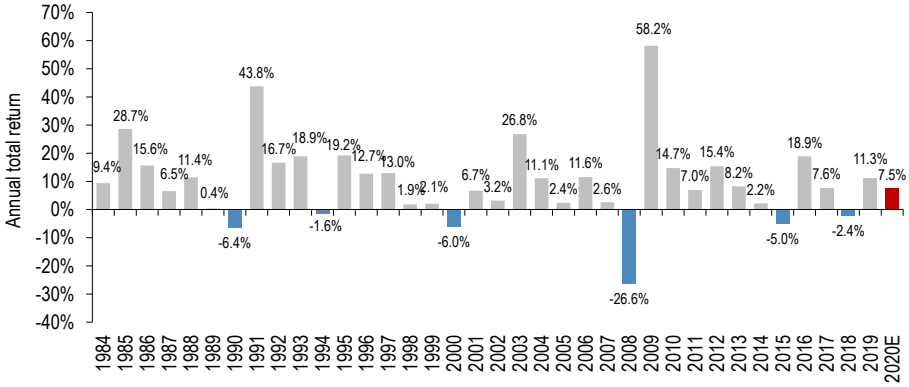
rise in Treasury yields (10yr ~3%), a 20% slide in commodity prices, or more uncertainty leading into next year's Presidential election.

Figure 4: High yield bonds are expected to provide a full-year gain of 7.5%



Source: J.P. Morgan.

Leveraged Loan Performance Forecasts: Leveraged loans are providing a +7.0% total return in 2019, underperforming the S&P 500 (+25.3%), HY bonds (+11.5%) and IG bonds (+13.2%). Leveraged loan performance has lagged in 2019 due to falling rates and rising rating/sector dispersion. In particular, 3-month LIBOR is down 90bp year to date, which has had a negative impact on coupons and the pricing environment. And amid these conditions, the retail loan mutual fund base has experienced outflows in 53 of the last 54 weeks and has seen its AUM contract by 35%. Meanwhile, the weaker growth backdrop has produced poor performance for Split B/CCC loans (-3.0% YTD) and commodity-linked sectors such as Metals/Mining (-8.2%) and Energy (-4.5%). In addition, the distressed universe of loans (sub-$80) recently experienced its largest increase since August 2011 ($21bn in October to $81bn in November).

Is the underperformance of the loan asset class a harbinger of more difficult times to come for credit investors in 2020? We do not believe so. The worst of the damage to the US economy stemming from the China trade war is presumably behind, and our economists are not forecasting a recession in 2020. This should alleviate some of the concerns surrounding underperformance of lower quality credits and the recent rise in distressed volumes. Importantly, we are not projecting a pickup in default activity in 2020. Meanwhile our economists only expect one more Fed rate cut over the next few years. If realized, alongside any pickup in the global economy, these conditions could alleviate downward pressure on loan coupons and possibly reinvigorate demand for low duration products. As such, the forecasted 20% year-over-year drop in CLO issuance by our strategists (from ~$120bn to $95bn) is expected to be offset by less severe retail outflows (vs $35bn YTD) and a balanced technical (i.e. capital market restraint akin to 2019).

Our full-year 2020 return forecast for loans is 6.5%, which is only 100bp below our forecast for HY bonds after underperforming by an average of 260bp per annum between 2010 and 2019. Our year-end 2020 forecasts for loan yields and spreads (to a 3yr takeout) are 6.50% and 475bp, below current levels (6.60%, 511bp). Importantly, spread tightening is expected to be driven by an improving pricing environment (i.e. not mechanical due to re-pricing). Note prices for the leveraged loan index are $2 below the year-to-date high in May and less than 30% of the loan product trades above Par.

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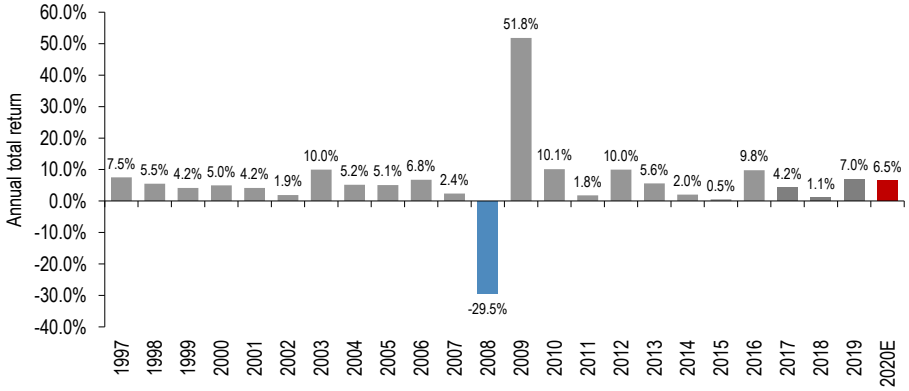
Figure 5: Loans are expected to provide a full-year gain of 6.5%



Source: J.P. Morgan.

Ratings: We recommend fund managers Overweight Bs, Underweight BBs, and remain Neutral CCCs. The past year's softer economy and rapid decline in interest rates has led to the outperformance of higher-quality over lower-quality issuers. Despite gains of more than 20% for the S&P 500, CCC-rated bonds are underperforming for a seventh consecutive month and are lagging the broader index by 500bp year to date. Meanwhile, BB-rated bonds are providing their largest gain of the past 10 years. Year to date, BB-rated bonds (+13.8%) are narrowly outperforming Single B-rated bonds (+12.8%) and are comfortably outperforming CCC-rated (+5.7%) bonds despite giving up significant income. Thus, on a historical basis, Single B-rated bonds now appear more attractive versus Double Bs, whereas CCCs appear modestly cheap on a historical basis versus BBs and Bs. For example, BB-rated bond spreads of 279bp are 3% tight to the 12M average of 288bp, 22% tight to the 20yr median of 360bp, and compare to an all-time low of 162bp. Single B-rated bond spreads of 491bp are 1% tight to the 12M average of 492bp, 11% tight to the 20yr median of 554bp, and compare to an all-time low of 247bp. And CCC-rated bond spreads of 1117bp are 21% wide to the 12M average of 913bp, 4% wide to the 20yr median of 1077bp, and compare to an all-time low of 469bp. In other words, every category carries a spread tight to its median but also comfortably above where it bottomed during other credit cycles. Furthermore, CCC-rated bond spreads are more extreme versus BBs and Bs after underperforming sharply over the past year. Going forward, a baseline case for a moderate increase in Treasury yields from our rates strategists and stable US economy would normally underpin an above-average risk profile. However, as we enter the 11th year of this economic/credit cycle, we see the risks around CCCs as too asymmetric; thus, we believe Single B-rated bonds (6.5% YTW, 491bp STW) continue to strike the best balance between the quest for income, limited rate sensitivity, and low embedded default risk. We also advocate investors allocate to B1 and B2 rated loans over Double B bonds, where the yield pickup is now 160bp and 260bp, respectively, or comfortably above an average yield differential of 75bp and 190bp since 2010.

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Table 3: High yield bond spreads by rating

	HY	IG	BBB	BB	B	CCC	HY – IG	BB-BBB	B – BB	CCC – B
3-Dec-19	486bp	112bp	142bp	279bp	491bp	1117bp	374bp	137bp	212bp	626bp
12 Month High	578bp	161bp	200bp	385bp	604bp	1117bp	417bp	185bp	242bp	629bp
12 Month Low	408bp	109bp	139bp	241bp	427bp	767bp	296bp	98bp	176bp	315bp
12 month average (daily)	469bp	125bp	158bp	288bp	495bp	929bp	345bp	130bp	207bp	434bp
All time low	266bp	51bp	99bp	162bp	247bp	469bp	179bp	28bp	50bp	103bp
Post-crisis low	355bp	87bp	110bp	212bp	352bp	634bp	253bp	89bp	124bp	235bp
20 Yr Median (Monthly)	556bp	136bp	176bp	360bp	554bp	1077bp	425bp	175bp	186bp	501bp
% above / below 12 month average	3.8%	-11.1%	-10.4%	-3.2%	-0.6%	21.5%	9.2%	5.6%	3.1%	47.0%
% above / below 20yr median	-12.7%	-17.8%	-19.0%	-22.4%	-11.4%	3.8%	-11.9%	-21.9%	13.8%	24.9%

Source: J.P. Morgan.

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Performance review

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Performance review

2019 performance highlights

- Leveraged loans provided a solid performance in 2019 alongside high returns for bonds and stocks as well. Loans started the year strong with a positive first quarter, and were less affected than bonds in a volatile second quarter. The third and fourth quarter saw loans fluctuate moderately, but ended the year on a high with a rally through November and December. Overall, leveraged loans returned +8.64% in 2019. Meanwhile, high-yield bonds outperformed loans with gains of +14.08% in 2019. For other asset classes, the S&P 500 returned +31.48%, investment-grade bonds returned +14.04%, 10-year Treasuries returned +9.91%, and emerging markets bonds returned +14.42%.
- By rating, BB rated loans led the pack with returns of +9.50%, while B rated loans returned +8.78%. Split-B/CCC-rated loans lagged behind with gains of +1.45%. By industry, all but one of the 21 industries in our Leveraged Loan Index had positive returns in 2019. The best performing industry was Retail (+11.39%) followed by Housing (+11.19%) and Cable/Satellite (+10.71%). Meanwhile, Metals/Mining was the biggest laggard, returning a loss of -5.51%. Energy sector loans managed to provide positive returns by year end after a big rally in December, ending 2019 up +0.09%.
- The spread of the J.P. Morgan Leveraged Loan Index decreased 96bp to 463bp in 2019, hitting a low of 434bp on May 3, but consistently less than the 2019 high on January 2. Loan spreads decreased 85bp in 1Q, decreased a further 2bp in a volatile 2Q, and increased 21bp in 3Q before dropping 29bp in 4Q. Meanwhile, the average yield of the Leveraged Loan Index decreased 184p to 6.29% in 2019.
- Institutional loan new-issue volume fell considerably in 2019, after volumes reached a record high in 2017 and the second highest annual volume in 2018. Specifically, gross loan issuance totaled $392bn in FY19, a 44% y/y decrease from 2018's volume of $704bn, which itself was down 28% from 2017's record-high volume of $974bn. Including $171bn of pro-rata loan issuance, total loan volume was $563bn.
- Leveraged loan funds experienced their largest outflows on record in 2019 amid three Fed rate cuts, falling Treasury yields, and rising rating/sector dispersion. Outflows in FY19 totaled -$38.3bn, which compares to flows over the previous five years totaling -$4.7bn in FY18, +$13.1bn in FY17, +$9.2bn in FY16, -$21.7bn in FY15, and -$23.8bn in FY14. After suffering three of the largest weekly outflows on record in December 2018 and the largest quarterly exodus on record in 4Q18 ($20.7bn), withdrawals remained steady throughout 2019 with weekly outflows occurring in 51 of 52 weeks.
- Default activity was higher for a second consecutive year in 2019, with volume ranking as the seventh highest annual total on record. Notably, the increase in activity was due largely to elevated activity in the commodities sectors, as Energy and Metals/Mining accounted for essentially half of the year's defaults/distressed activity. Overall, 43 companies defaulted in 2019, with debt totaling $51.5bn in bonds and loans, while an additional ten companies completed distressed exchanges totaling $7.8bn. By comparison, 32 companies totaling $43.1bn defaulted or completed a distressed exchange in FY18.

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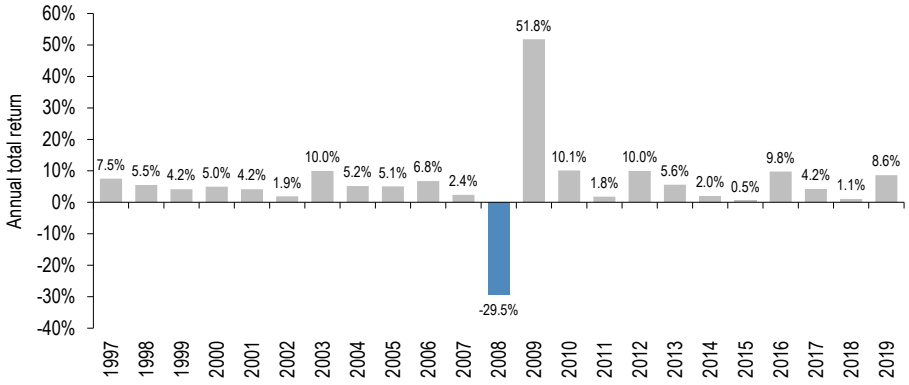
2019: year in review

Leveraged loans provided a solid performance in 2019 alongside high returns for bonds and stocks in a rewarding year amid rate cuts, global economic and political tensions and uncertainty surrounding the US-China trade dispute. Loans started the year strong with a positive first quarter, and were less affected than bonds in a volatile second quarter. The third and fourth quarters saw loans fluctuate moderately, but the asset class ended the year on a high with a rally through November and December. Overall, leveraged loans returned +8.64% in 2019, gaining +3.89% in 1Q, +1.63% in 2Q, +1.03% in 3Q and +1.85% in 4Q. Notably, loans gained +2.23% over the last two months of the year, with only one down session in the duration of those two months. For context, returns over the previous eight years were +1.08% in 2018, +4.2% in 2017, +9.8% in 2016, +0.5% in 2015, +2.0% in 2014, +5.6% in 2013, +10.0% in 2012, +1.8% in 2011, and +10.1% in 2010.

Figure 1: Annual leveraged loan total returns; 2019 the second highest return since 2012



Source: J.P. Morgan.

Meanwhile, high yield bonds returned double digit returns for the fourth time post crisis. Specifically, high-yield bonds provided a +14.08% total return 2019, after sustaining a loss of -2.4% in full year 2018. Cumulative US high-yield bond returns touched +8.75% by the end of April before falling to 7.33% as May ended. Some volatility plagued the HY index in the following months, but a late rally in December led to FY gains of +14.08% by yearend. For context, returns over the previous few years were -0.24% in 2018, +7.6% in 2017, +18.9% in 2016, -5.0% in 2015, +2.2% in 2014, +8.2% in 2013, +15.4% in 2012, +7.0% in 2011, and +14.7% in 2010. By quarter, high-yield bonds returned +7.27% in 1Q, +2.43% in 2Q, +1.01% in 3Q, and +2.96% in 4Q.

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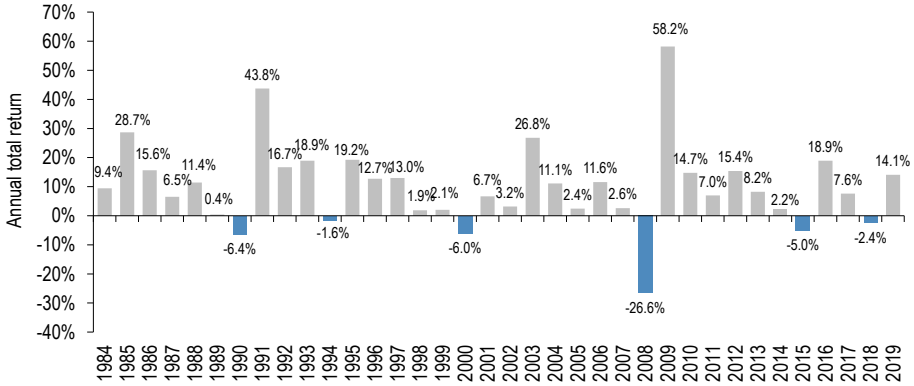
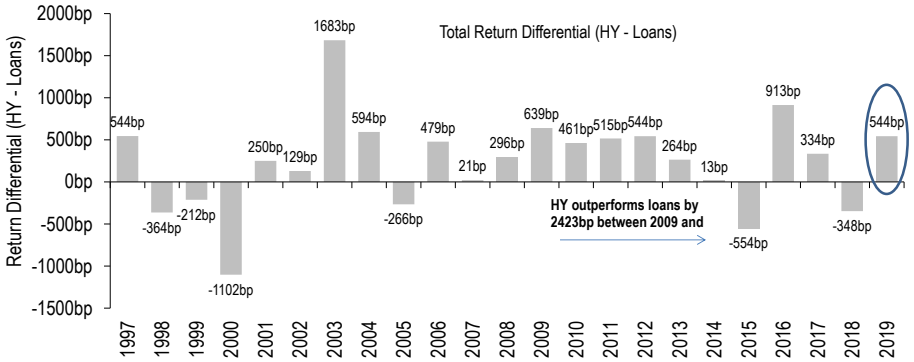
Figure 2: Annual high-yield total returns



Source: J.P. Morgan.

Leveraged loans underperformed the HY asset class by 544bp in 2019, after outperforming last year. Leveraged loans have underperformed HY bonds in all but three years since 2001. For context, the return differentials between the HY and loan asset classes (HY – LL) over the previous few years were -348bp in 2018, +334bp in 2017, +913bp in 2016, -554bp in 2015, +13bp in 2014, +264bp in 2013, +544bp in 2012, +515bp in 2011, and +461bp in 2010; the average HY outperformance of loans since 2001 is +332bp. **For other asset classes, the S&P 500 returned +31.48% in 2019, investment-grade bonds returned +14.04%, 10-year Treasuries returned +9.91%, and emerging markets bonds returned +14.42%.**

Figure 3: Total return differential between high-yield bonds and leveraged loans



Source: J.P. Morgan.

2019 Timeline of Events

First Quarter

Leveraged loans started 2019 strong, though they underperformed high-yield bonds and the S&P 500 in January. The market was under pressure in December amid slowing global growth indicators, sharp equity and oil declines, and heavy withdrawals, but recovered in the first month of the year after strong US economic data and dovish remarks from Fed Chair Powell improved sentiment. The S&P 500 went on to post its strongest January (+8.01%) recorded in the 21st century. Loan and bond prices benefitted from the dovish shift in the Fed narrative, perceived progress on US-China trade talks, and a rapid improvement in Oil and equity prices, as WTI oil prices climbed $8.38 in January. Leveraged loans posted a monthly return of

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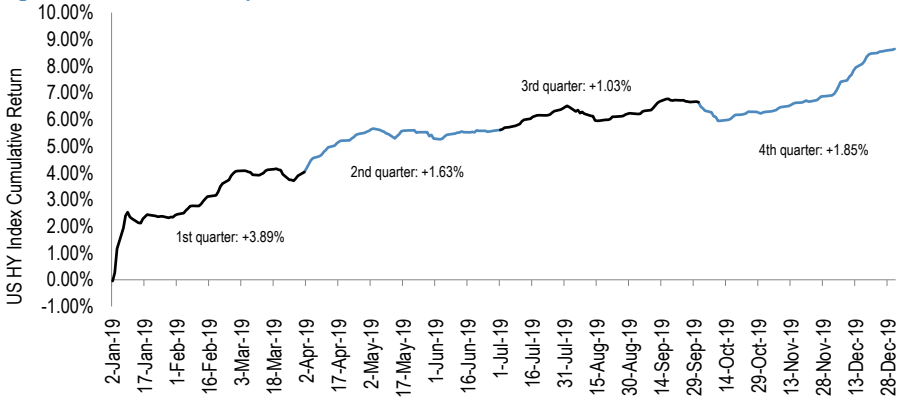
+2.42%, alongside +4.57% gains for high yield bonds. BB rated loans (+3.07%) outperformed Single B (+2.13%) and CCC (+1.29%) rated loans. January's rally for loan and bond prices extended into February, as the Leveraged Loan index climbed +1.60% in February alongside +1.69% gains for bonds. The S&P 500 performed well in February too, albeit displaying more volatility than in January, posting a monthly return of +3.21%, and pushing YTD returns into double digits (+11.48%). Meanwhile, 10yr US Treasury yields climbed 9bp in February after initially struggling to breakout despite the risk-on backdrop. In March, leveraged loan prices came under some pressure, as global economic concerns exerted downward pressure on Treasury yields, loan and bond prices, and stocks. Though HY bonds and stocks were able to recover early losses to finish the month in the green, leveraged loans were unable to sustain a mid-month recovery as they returned a -0.16% loss in the month of March. Leveraged loans ended 1Q19 up +3.89%, trailing HY bonds which had gained +7.27% by the end of March. Meanwhile, the S&P 500 had gained +13.85%.

Figure 4: Cumulative loan performance in 2019



Source: J.P. Morgan.

Second Quarter

April brought another rally for leveraged loans, as the Loan index climbed +1.59% to outperform HY bonds for the first time in 2019. The month started with surges in loan prices alongside stocks and 10yr US treasury yields amid optimism around US-China trade talks and strong global data. While stocks and bonds faced some turbulence mid-month, loan prices methodically trudged along to end the month without a single down session. The S&P 500 gained +4.05% in April, its second highest monthly return to that point, while bonds gained +1.44%. Notably, April saw the heaviest CLO issuance of 2019, as 38 CLOs priced for $19.3bn. Optimism in April was short-lived, however, as the US-China trade dispute worsened in May, sending loan, bond and stock prices tumbling. Whereas most investors had assumed Trump and Xi would reach a deal by June's G20 meet, markets gradually lost hope amid escalating tariffs from both countries, and the actions around Huawei and other tech companies. Loans held in more than bonds though as the loan index ended May down -0.24% as compared to -1.27% losses for bonds and -6.35% for stocks; 10yr US Treasury yields reached a low since 4Q17. Unsurprisingly, commodities sectors were badly hit, as Metals/Mining loans fell -0.86% and Energy loans fell -0.26%. By the end of May, the Metals/Mining sector was the worst performing sector, with returns of +3.57% YTD, as compared to +5.29% for the broader loan index. And in June, loans, bonds and stocks bounced back as high-yield bonds went on to post their second best monthly returns in 2019 (+2.28%). Meanwhile, loans too recovered the losses sustained in May and then some, as the loan index climbed +0.28% in June.

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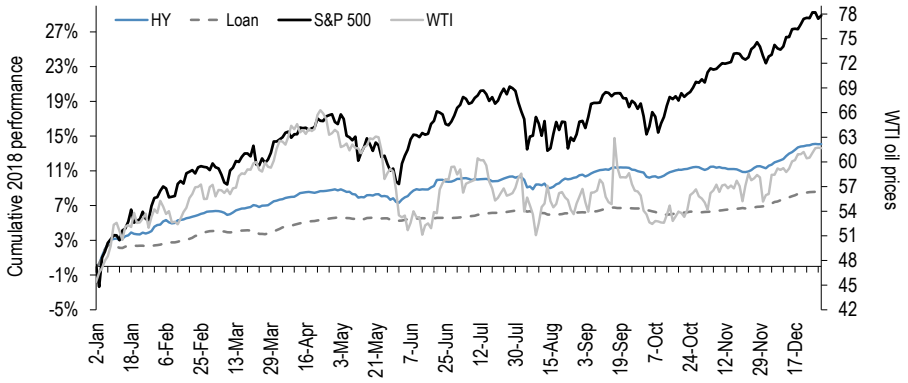
These gains were led by dovish rhetoric from the Fed early in June, leading the market to expect a higher number of fed cuts towards the end of the year. Sentiment further improved following the avoidance of Mexican tariff hikes, while cautious optimism slowly gathered around US-China trade talks. Meanwhile, Oil prices closed 5- 6% higher amid tensions with Iran, and 10yr US Treasury yields also crossed 2.0% for the first time since 4Q16. Loans, with a +1.63% 2Q return, ended the year's halfway mark with a +5.58% return, underperforming bonds (+9.88%) and the S&P 500 (+18.54%).

Figure 5: HY, loan, and equity cumulative performance versus oil prices



Sources: J.P. Morgan, Bloomberg.

Third Quarter

Leveraged loans outperformed high-yield bonds in July, as bond gains moderated and would continue to range between +0.19% and +0.74% through November. Loans gained +0.84% and the S&P 500 gained +1.44%, which was the smallest gain for the index in 2019 (excluding the losses in May). Loan prices were supported by a dovish Fed, progress on China trade talks, and 2Q earnings season that surpassed expectations. Despite steady gains for the broader loan market, the commodity sectors continued their weak run of performance. Metals/Mining was the worst performing sector, falling -0.13% and cemented their position as the worst performing sector YTD. In August, leveraged loans, alongside high yield bonds, stocks and government bond yields were under heavy pressure early on, as a series of tweets by President Trump threatened additional tariffs on China amid heightened global economic uncertainty. Though bond prices eventually recovered later in the month to finish August up +0.22%, loan prices failed to recover and ended the month down -0.22%. Meanwhile, the S&P 500 endured heavy volatility and went on to fall -1.60% in the duration of the month. US-China trade tensions escalated as the Yuan closed at its lowest in a decade early in August. Slowing international growth data in China and Europe and a collapse in global bond yields caused investors to question the economic cycle, and most notably, the 2s/10s US Treasury curve inverted for the first time since 2007. And again commodity sector loan prices collapsed in August, as Metals/Mining fell -2.89% and Energy loans fell -2.52%. By the end of August, Metals/Mining loans were providing negative returns on YTD basis (-0.98%). However, leveraged loan prices started September strongly amid improvement in the political situation in Hong Kong SAR and improved sentiment regarding the avoidance of a "no deal" Brexit. This optimism was boosted by positive developments on US-China trade and the central bank meetings (ECB, Fed, BoJ) all in mid-September. The loan index finished the month up +0.44%, while US bonds returned +0.29% and the S&P 500 gained +1.70%. As expected, Energy loans suffered in September, continuing a poor run over the past five months. Energy loans

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fell -2.26% in September, while Metals/Mining loans fell -2.52% in a month where all other sectors managed to provide positive returns. At the three-quarter mark, loans were up +6.67%, compared with 10.88% for high-yield bonds.

Table 1: Returns of various asset classes

Assets	1Q19	2Q19	3Q19	4Q19	2019
US High-Yield Bonds	7.27%	2.43%	0.91%	2.88%	14.08%
Leveraged Loans	3.89%	1.63%	1.03%	1.85%	8.64%
Other asset classes					
10-Year Treasury	3.07%	4.30%	3.37%	-1.74%	9.17%
Investment Grade Bonds	4.91%	4.41%	2.95%	1.14%	14.04%
Emerging Market Bonds	6.59%	3.76%	1.34%	2.09%	14.42%
Emerging Market Stocks	10.40%	1.44%	-3.78%	11.19%	19.82%
S&P 500	13.65%	4.30%	1.70%	9.06%	31.48%
By rating					
BB-rated bonds	7.30%	2.99%	1.76%	2.81%	15.61%
B-rated bonds	7.38%	2.41%	1.82%	3.32%	15.69%
CCC-rated bonds	6.80%	1.86%	-1.20%	3.50%	11.25%
BB-rated loans	4.45%	1.73%	1.63%	1.39%	9.50%
B-rated loans	3.65%	1.61%	1.00%	2.27%	8.78%
Split B/CCC-rated loans	3.38%	0.59%	-4.53%	2.19%	1.45%

Source: J.P. Morgan; S&P/LCD; Bloomberg.

Fourth Quarter

The leveraged loan index once again slumped in October, after the US ISM manufacturing survey for September unexpectedly declined to its lowest reading since the last recession in June 2009. Loans ended October down -0.38%, while HY bonds returned a modest +0.19%. Meanwhile, the S&P 500 saw some turbulence in early October, but rose +2.17%, mainly supported by better than expected 3Q earnings. The higher rated BB loans held on to some gains (+0.05%), but Single B (-0.57%) and CCC (-1.16%) rated loans severely underperformed. Metals/Mining loans suffered their heaviest setback of the year as they lost -4.61% in October, while Energy loans fell -2.68% as well. November brought a steady rally for loans, as the loan index climbed +0.58%. However, November was characterized by bifurcated performance, as strong gains in BB (+0.47%) and Single B (+0.86%) rated loans were held back by heavy losses in CCC rated loans (-1.58%). And this was mirrored in HY bonds as well, as high-yield bonds provided modestly positive returns in November totaling +0.39%, with steep losses for CCCs totaling -1.61% cutting down sharp gains for Single B and Double B bonds of +0.82% and +0.81%. Prices rose amid a strong headline jobs number and apparent progress towards a US-China phase-one trade deal, but investors' attention was drawn towards heavy primary market activity as the month progressed; $56bn of new loans were issued in November, which was a 12-month high. November's rally continued into December, as the leveraged loan index went a full month without a single down session to post the second highest monthly returns in 2019. Early gains were driven by a stronger than expected US payroll report, but gains really took off after a 'Phase One' deal was agreed between US and China that removed near-term downside risk of further escalation in the tariff war. Leveraged loans gained +1.65% in December and 53.03% of loans traded above par by the end of December, which was a 14-month high. Bonds and stocks rallied as well, with the US HY bond index climbing +2.29% in December and the S&P 500 rising 3.00%. The Energy sector went on an astonishing rally in December, climbing +4.49% over the course of the month to end the year in the green (+0.09% in 2019).

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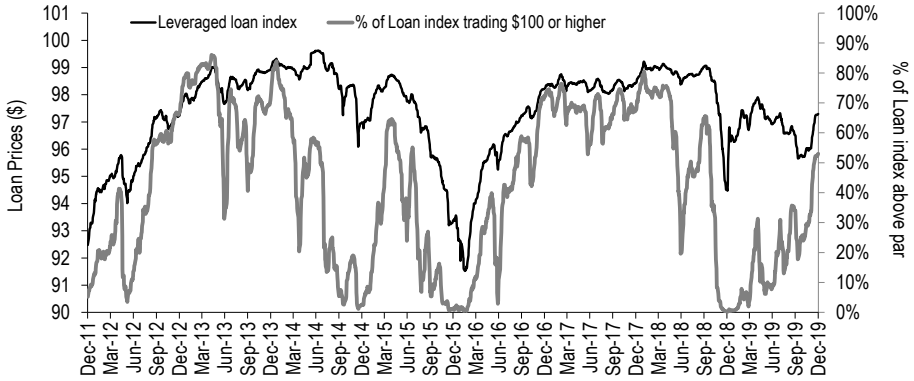
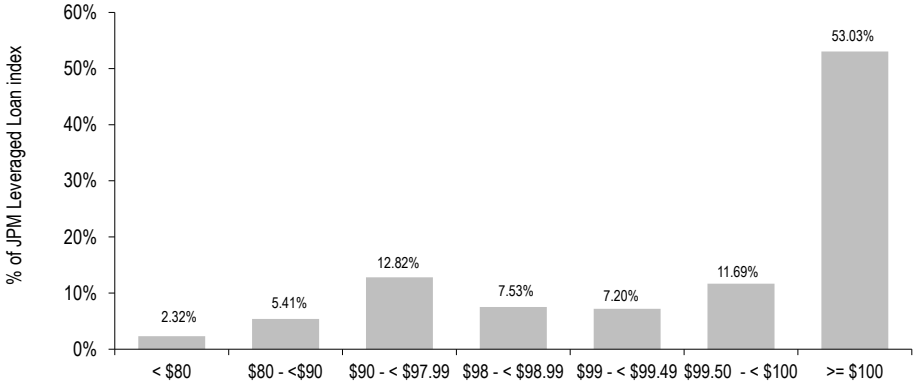
Figure 6: Loan prices peaked at $97.91 before ending the year at $97.29



Source: J.P. Morgan.

Figure 7: % loans above Par ended 2019 at a 14-month high of 53.03%

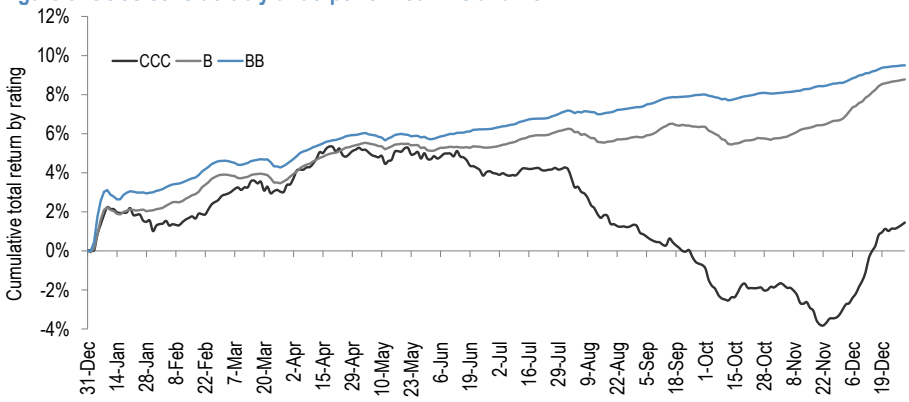


Source: J.P. Morgan.

Performance by rating and industry

In full-year 2019, BB rated loans returned +9.50%, while B rated loans returned +8.78% and Split B/CCC rated loans returned +1.98%. Notably, the lower-rated portion of the market's cumulative performance reached a low of -3.8% as of November 22nd, but a strong +5.5% rally over the last month-plus brought them back into the green.

Figure 8: CCCs considerably underperformed BBs and Bs



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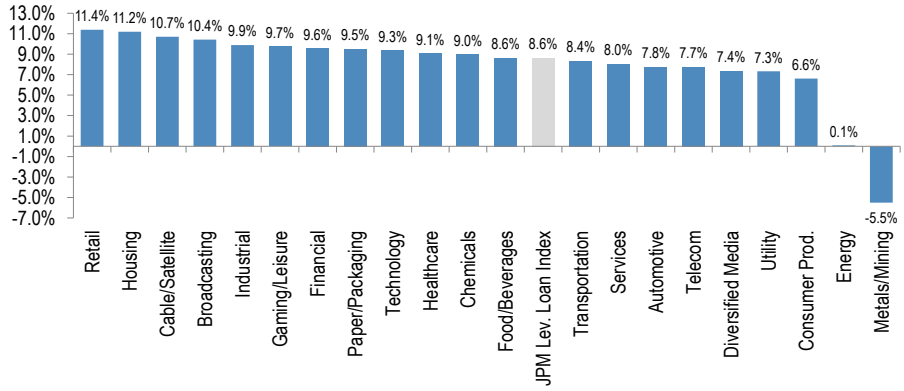
By industry, all but one of the 21 industries in our Leveraged Loan Index had positive returns in 2019. The best performing industry was Retail (+11.4%), followed by Housing (+11.2%) and Cable/Satellite (+10.7%). Meanwhile, Metals/Mining was the biggest laggard, returning a loss of -5.5%, while the Energy sector managed to provide very modest positive returns by yearend (+0.1%) after a big rally in December. While the Loan Index returned +8.64% in 2019, the index excluding commodities was up +9.08%.

Figure 9: Retail was the year's largest outperformer, while Metals/Mining was the year's biggest laggard

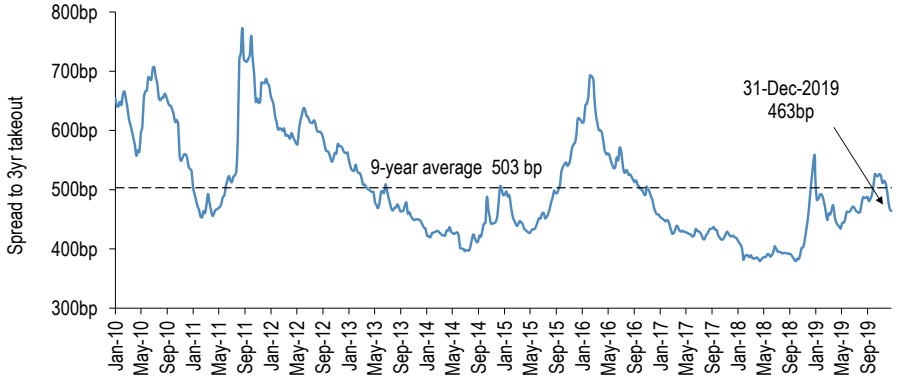


Source: J.P. Morgan.

Spreads

The spread of the J.P. Morgan Leveraged Loan Index decreased 96bp to 463bp in 2019, hitting a low of 434bp on May 3rd, but consistently less than the 2019 high on January 2. Loan spreads decreased 85bp in 1Q, decreased a further 2bp in a volatile 2Q, and increased 21bp in 3Q before dropping 29bp in 4Q. Meanwhile, the average yield of the Leveraged Loan Index decreased 184p to 6.29% in 2019. Over the course of the year, yields mostly fell from a 2019 high of 8.15% on January 2, reaching a low of 6.15% on August 5.

Figure 10: Spread to 3-year takeout in the leveraged loan market



Source: J.P. Morgan.

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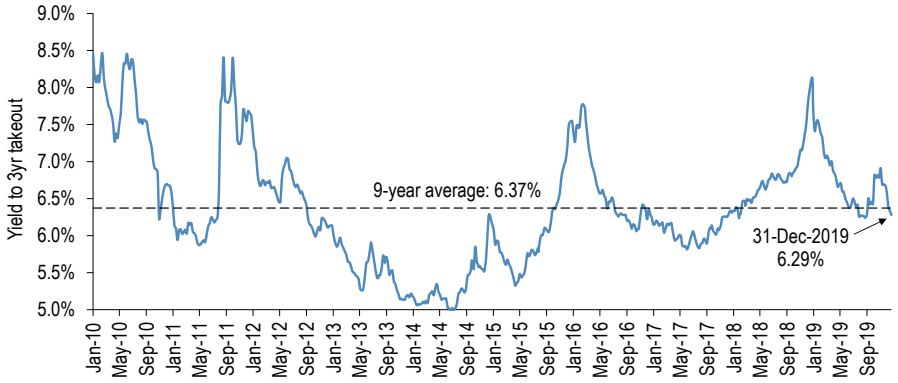
Figure 11: Yield to 3-year takeout in the leveraged loan market



Source: J.P. Morgan.

In 2019, spreads for BB and B rated categories decreased, but increased considerably for Split B/CCC rated loans. Specifically, BB spreads decreased by 166bp to 268bp, B spreads decreased by 103bp to 484bp, while CCC spreads increased 285bp to 1649bp. This is despite spreads falling 354bp in the last two months of the year, as CCC spreads had reached 2003bp at the start of November. Similarly, yields (to 3-year) for BB loans decreased 254bp to 4.35%, B loan yields decreased 191bp to 6.51%, and yields for CCC rated loans rose 196bp to 18.18%. The differential in yield between BB-rated loans and B-rated loans was 216bp as of December 31, up 63bp from 153bp at the end of 2018, and above its 10-year average of 198bp. The difference in yield between B-rated loans and Split B/CCC-rated loans was 1167bp, widening 387bp from 780bp at the end of 2018, and well above its 10-year average of 825bp.

Table 2: Spreads in the leveraged loan market

Date	Loan Index	BBB	Split BBB	BB	Split BB	B	Split B/CCC	NR
31-Dec-07	460bp	182bp	318bp	380bp	448bp	516bp	679bp	507bp
31-Dec-08	1967bp	841bp	929bp	1415bp	1947bp	2412bp	3630bp	1963bp
31-Dec-09	695bp	305bp	356bp	426bp	675bp	679bp	1163bp	999bp
31-Dec-10	532bp	231bp	318bp	365bp	568bp	555bp	862bp	734bp
30-Dec-11	676bp	261bp	335bp	446bp	534bp	811bp	1745bp	972bp
31-Dec-12	563bp	262bp	302bp	384bp	477bp	563bp	1677bp	747bp
31-Dec-13	435bp	285bp	271bp	312bp	382bp	464bp	1271bp	678bp
31-Dec-14	491bp	433bp	326bp	379bp	454bp	541bp	1110bp	724bp
31-Dec-15	617bp	285bp	323bp	429bp	528bp	705bp	2496bp	858bp
30-Dec-16	458bp	248bp	246bp	313bp	377bp	484bp	1418bp	697bp
29-Dec-17	419bp	218bp	220bp	280bp	334bp	437bp	1438bp	649bp
31-Dec-18	559bp	330bp	351bp	435bp	499bp	587bp	1365bp	746bp
31-Dec-19	**463bp**	**165bp**	**196bp**	**268bp**	**331bp**	**484bp**	**1649bp**	**626bp**
Change								
1Q19	-85bp	-93bp	-104bp	-119bp	-95bp	-78bp	-2bp	-53bp
2Q19	-2bp	-18bp	-13bp	-15bp	-19bp	-6bp	163bp	66bp
3Q19	21bp	-36bp	-25bp	-22bp	-34bp	10bp	305bp	-34bp
4Q19	-29bp	-17bp	-12bp	-11bp	-19bp	-29bp	-182bp	-99bp
2019	-96bp	-165bp	-155bp	-166bp	-167bp	-103bp	285bp	-119bp

Source: J.P. Morgan.

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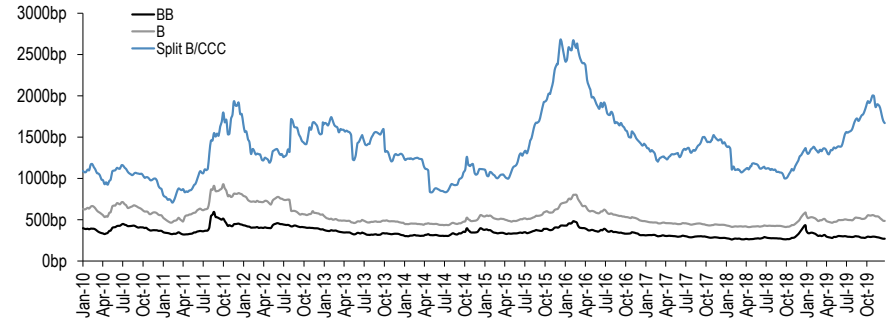
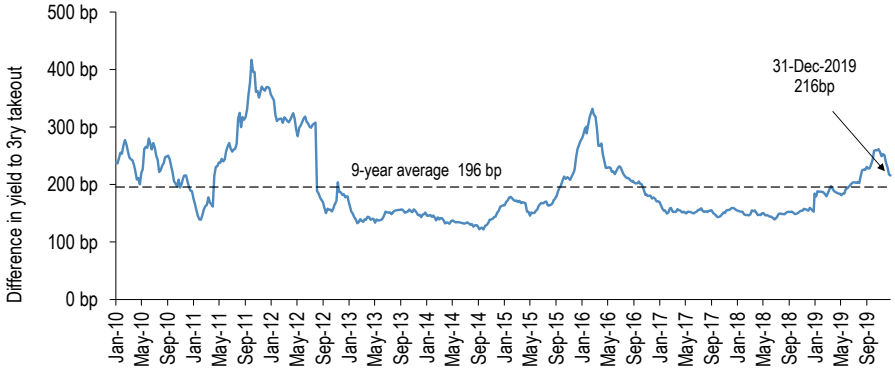
Figure 12: Spread to 3 year by rating



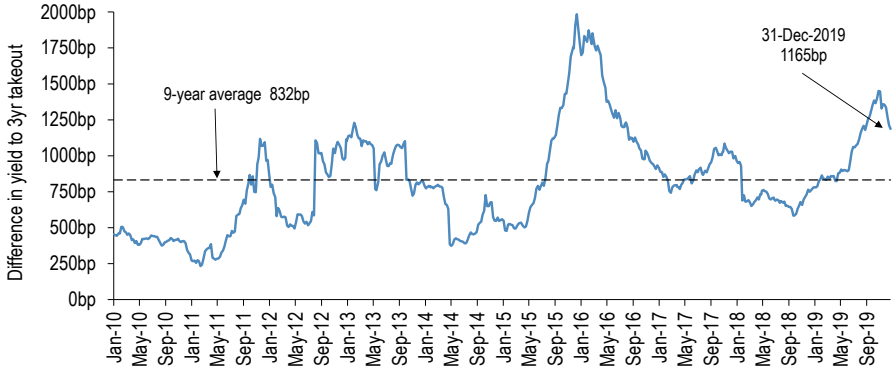
Source: J.P. Morgan.

Figure 13: Spread between issues rated BB and B



Source: J.P. Morgan.

Figure 14: Spread between issues rated B and CCC



Source: J.P. Morgan.

By industry, spreads in all but three of the 21 industries in the J.P. Morgan Leveraged Loan Index decreased in 2019. Among the three industries in which spreads widened, Energy spreads increased the most. By the end of 2019, Energy spreads were at 1043bp, 232bp wider than they were at the end of 2018. Metals/Mining spreads increased 129bp to 872bp, while Consumer Product sector spreads increased 9bp to 659bp. On the other hand, Telecom and Transportation spreads fell 208bp apiece to 449bp and 356bp by the end of 2019. As of December 31, Energy loans traded the widest by far, at 1043bp, followed by Metals (872bp)

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and Consumer Products (659bp), while Cable/Satellite traded the tightest at 281bp, ahead of Broadcasting (314bp) and Gaming/Leisure (320bp).

Table 3: Spreads by industry in the loan market

	31-Dec-13	31-Dec-14	31-Dec-15	30-Dec-16	29-Dec-17	31-Dec-18	31-Dec-19	1Q19	2Q19	3Q19	4Q19	2019
Automotive	363bp	392bp	544bp	400bp	339bp	**510bp**	**468bp**	-63bp	13bp	34bp	-26bp	**-42bp**
Broadcasting	488bp	524bp	804bp	649bp	899bp	**489bp**	**314bp**	-111bp	-35bp	-32bp	2bp	**-175bp**
Cable and Satellite	310bp	360bp	401bp	295bp	295bp	**474bp**	**281bp**	-97bp	-39bp	-35bp	-22bp	**-193bp**
Chemicals	376bp	454bp	498bp	354bp	308bp	**463bp**	**372bp**	-84bp	0bp	17bp	-24bp	**-91bp**
Consumer Products	436bp	513bp	560bp	517bp	618bp	**650bp**	**659bp**	2bp	19bp	25bp	-37bp	**9bp**
Diversified Media	556bp	596bp	753bp	486bp	500bp	**699bp**	**544bp**	-58bp	-11bp	26bp	-112bp	**-155bp**
Energy	480bp	949bp	1863bp	1125bp	694bp	**811bp**	**1043bp**	-101bp	84bp	246bp	3bp	**232bp**
Financial	429bp	526bp	526bp	421bp	336bp	**499bp**	**352bp**	-110bp	-12bp	-7bp	-18bp	**-147bp**
Food and Beverages	330bp	396bp	436bp	353bp	316bp	**528bp**	**405bp**	-88bp	-12bp	-11bp	-13bp	**-123bp**
Gaming Lodging and Leisure	418bp	573bp	540bp	387bp	294bp	**450bp**	**320bp**	-95bp	-22bp	-11bp	-2bp	**-130bp**
Healthcare	390bp	417bp	500bp	439bp	394bp	**574bp**	**486bp**	-69bp	-2bp	33bp	-49bp	**-88bp**
Housing	393bp	422bp	449bp	347bp	328bp	**523bp**	**338bp**	-94bp	-23bp	-28bp	-40bp	**-185bp**
Industrials	395bp	453bp	586bp	408bp	363bp	**528bp**	**431bp**	-90bp	-11bp	20bp	-16bp	**-97bp**
Metals and Mining	420bp	730bp	1810bp	550bp	717bp	**743bp**	**872bp**	-77bp	136bp	165bp	-94bp	**129bp**
Paper and Packaging	367bp	465bp	525bp	348bp	321bp	**518bp**	**381bp**	-88bp	-25bp	2bp	-27bp	**-137bp**
Retail	427bp	490bp	641bp	595bp	753bp	**844bp**	**772bp**	-109bp	30bp	84bp	-77bp	**-72bp**
Services	453bp	514bp	609bp	446bp	395bp	**517bp**	**449bp**	-68bp	3bp	11bp	-14bp	**-68bp**
Technology	405bp	454bp	561bp	425bp	369bp	**530bp**	**442bp**	-96bp	-3bp	30bp	-19bp	**-88bp**
Telecommunications	369bp	408bp	474bp	385bp	425bp	**657bp**	**449bp**	-108bp	10bp	10bp	-120bp	**-208bp**
Transportation	384bp	457bp	530bp	416bp	423bp	**563bp**	**356bp**	-60bp	13bp	21bp	-182bp	**-208bp**
Utility	914bp	430bp	683bp	467bp	416bp	**529bp**	**516bp**	-81bp	-4bp	21bp	51bp	**-13bp**
JPM Leveraged Loan Index	**435bp**	**491bp**	**617bp**	**458bp**	**419bp**	**559bp**	**463bp**	**-85bp**	**-2bp**	**21bp**	**-29bp**	**-96bp**

Source: J.P. Morgan.

Loan and CLO primary market activity

Institutional loan new-issue volume fell considerably in 2019, after volumes reached a record high in 2017 and the second highest annual volume in 2018. **Specifically, gross loan issuance totaled $392bn in FY19, a 44% y/y decrease from 2018's volume of $704bn,** which itself was down 28% from 2017's record-high volume of $974bn. For context, volume totaled $485bn in 2016, $326bn in 2015, $467bn in 2014, and $670bn in 2013. Meanwhile, net volume is down as well, albeit not as much as gross issuance, with $193bn ex-refi/repricing deals issued this year as compared to $302bn in 2018 (-36%). **In addition, pro-rata loan volume totaled $171bn in 2019,** according to S&P's Leveraged Commentary & Data Group (LCD), which followed volumes of $187bn and $148bn in 2018 and 2017. This brought total loan volume (institutional plus pro-rata) to $563bn, the second lowest total since 2012, ahead of only 2015's $492bn in volume. By comparison, $891bn on combined issuance priced in 2018, a record-high $1.1trn priced in 2017, $627bn priced in FY16, $492bn priced in FY15, $618bn priced in FY14, and $821bn priced in FY13. The decline in issuance in 2019 was largely due to a significant decrease in repricing volume, which contracted from $254bn in 2018 to a seven-year-low $61bn in 2019, a 76% y/y drop. In addition, there was also a 38% decline in acquisition financing activity, as $157bn of such deals priced in 2019 versus $256bn the year prior. The decrease in activity in these two uses of proceeds accounted for nearly $300bn, whereas other uses of proceeds, which include refinancing, general corporate, and dividend deals, accounted for only $20bn less in volume y/y.

In 2019, gross CLO volume of $160.8bn was more than 40% lower than the prior year's volume of $277.6bn and 2017's record-high volume of $282.2bn, but still ranked as the third largest annual total on record. Notably, the decline in volume was due almost entirely to a significant contraction in refinancing and reset activity, as it totaled a mere $42bn in FY19, compared with totals of $147bn in 2018 and $165bn in 2017. Meanwhile, new CLO volume (ex-refi/resets) totaled $119bn in FY19, a

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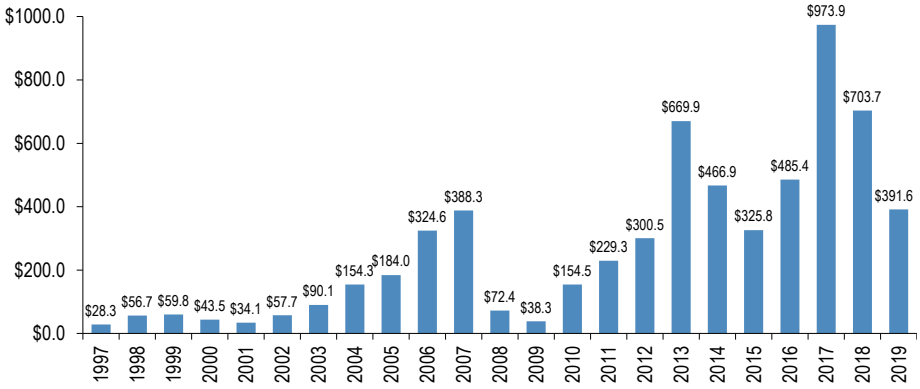
modest -9% y/y decrease from $131bn that priced in FY18 and slightly higher than the $117bn that priced in 2017. April saw the highest monthly volume in 2019, totaling $19.3bn, whereas December saw the lightest issuance, with monthly volume totaling only $6.5bn. In comparison, 2018 included one month with volume exceeding $30bn (June: $31.1bn) and a further eight months with volume exceeding $20bn.

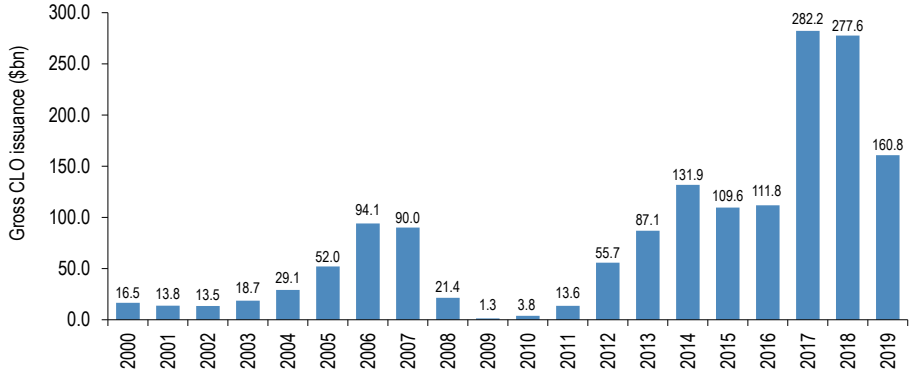
For more on new-issue activity and trends in the primary market please see section 3 of this publication, New-issue review.

Figure 15: Annual gross loan volume



Source: J.P. Morgan.

Figure 16: Annual US CLO volume



Source: J.P. Morgan; S&P LCD.

Leveraged loan fund flow review

Leveraged loan funds experienced their largest outflows on record in 2019 amid three Fed rate cuts, falling Treasury yields, and rising rating/sector dispersion. Outflows in FY19 totaled -$38.3bn (only -$150mn due to ETFs), which compares to flows over the previous five years totaling -$4.7bn in FY18, +$13.1bn in FY17, +$9.2bn in FY16, -$21.7bn in FY15, and -$23.8bn in FY14. Recall, the loan asset class reported $63bn of inflows in 2013 as 10yr US Treasury yields soared. After suffering three of the largest weekly outflows on record in December 2018 and the largest quarterly exodus on record in 4Q18 ($20.7bn), withdrawals remained steady throughout 2019 with weekly outflows occurring in 51 of 52 weeks. That said only three weekly outflows in 2019 exceeded $1.0bn, whereas the $2.3bn outflow in the first week of 2019 was the largest single outflow by nearly double. Outflows

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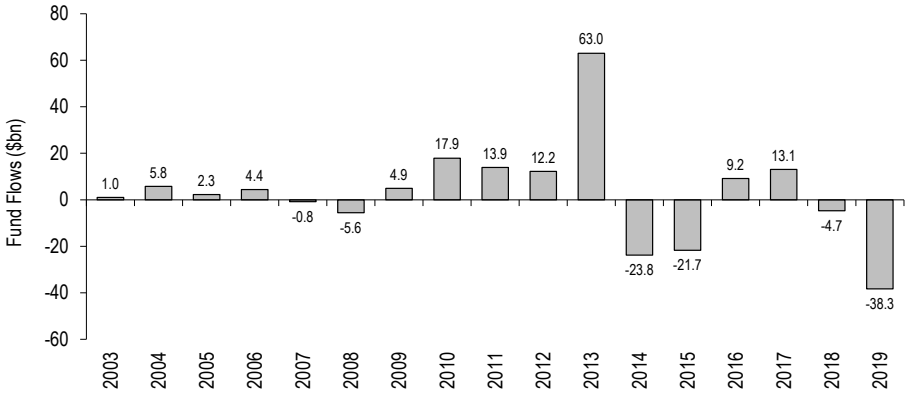
throughout the year were fairly evenly distributed, though they were slightly tempered in the final few months of the year. Outflows for loans in 1Q19, 2Q19, 3Q19 and 4Q19 totaled -$11.1bn, -$9.9bn, -$9.4bn, and -$8.0bn, respectively. Retail AUM decreased 27% during 2019 and at $97.1bn is 37% below the $154.0bn peak in Oct-18. For context, this dataset was below $30bn of AUM back in mid-2010, and declined to only $10bn during the midst of the financial crisis. Retail leveraged loan funds now account for just above 8% of the estimated $1.2trn institutional loan market, down from 20% at the beginning of 2014 and now below the 12% heading into 2013.

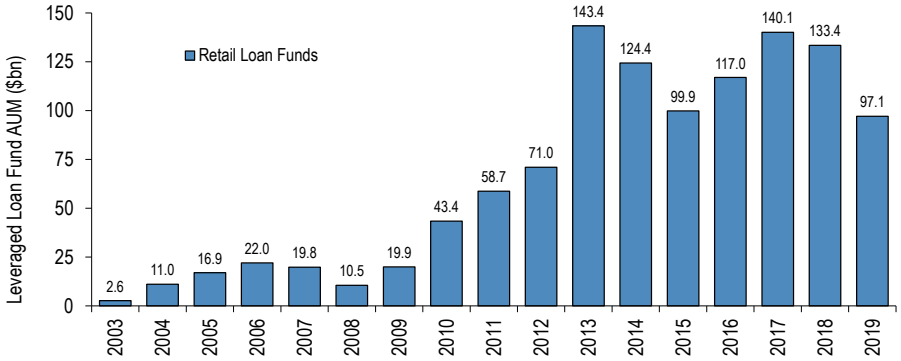
For more on fund flow activity please see section 6 of this publication, Fund flow review.

Figure 17: Loan funds faced the heaviest outflows on record in 2019



Source: Lipper FMI.

Figure 18: Loan retail fund AUM fell 27% in 2019



Source: Lipper FMI.

Defaults

Default activity was higher for a second consecutive year in 2019, with volume ranking as the seventh highest annual total on record. Notably, the increase in activity was due largely to elevated activity in the commodities sectors, as Energy and Metals/Mining accounted for essentially half of the year's defaults/distressed activity. Overall, 43 companies defaulted in 2019, with debt totaling $51.5bn in bonds and loans, while an additional ten companies completed distressed exchanges totaling $7.8bn. By comparison, 32 companies totaling $43.1bn defaulted or completed a distressed exchange in FY18 and 47 companies totaling $36.8bn were

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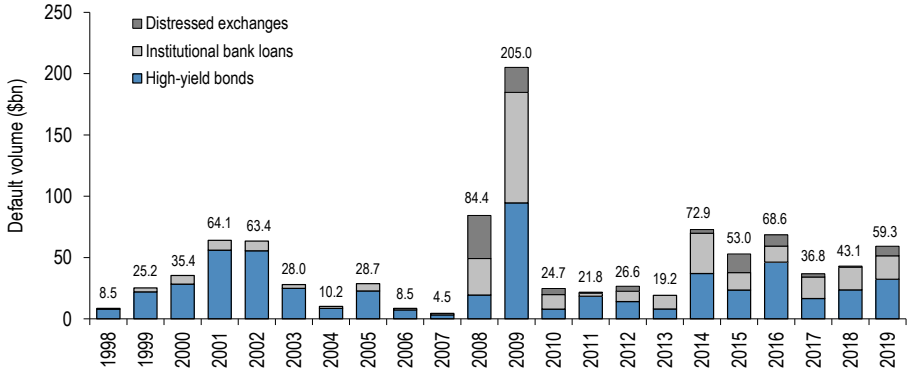
affected in FY17. The par-weighted loan default rate ended 2019 at 1.64%, decreasing 8bp over the course of the year and remaining well below the long term average default rate of 3.01%. The default rate including distressed exchanges is 2.06%. Meanwhile, the par-weighted US high-yield default rate ended 2019 at 2.63%, up +80bp y/y and below the long term average rate of 3.44%. Including distressed exchanges, the US high-yield default rate ended December at 2.86%. Notably, the par-weighted high-yield bond and loan default rates ex-commodities and including distressed exchanges ended the year at much more modest levels of 1.26% (vs 2.86%) and 1.39% (vs 2.06%), respectively.

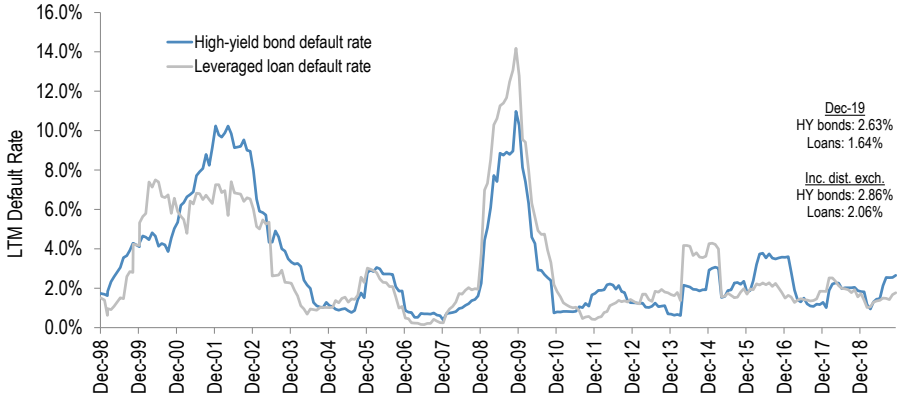
For more on defaults, pay downs & repayment rates, and ratings changes please see section 4 of this publication, Event risk in the high-yield market.

Figure 19: Annual default and distressed exchange volume



Source: J.P. Morgan.

Figure 20: High-yield bond and loan default rates



Source: J.P. Morgan.

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Gainers and Losers

Table 4: First-quarter 2019 gainers and losers

Gainers	Price	Change	Industry
Covia L+375 TL B '25	85.09	13.09	Energy
Lannett L+537.5 TL B '22	92.67	11.37	Healthcare
PetSmart L+300 TL B '22	89.51	10.76	Retail
Terra-Gen Finance Co L+425 TL B '21	89.50	9.50	Utility
Diebold L+275 TL B '23	93.15	9.15	Technology
Neiman Marcus Group L+325 TL B '20	92.75	8.53	Retail
Crosby Worldwide L+300 TL '20	97.38	7.88	Industrials
Container Store L+500 TL B '23	99.25	7.75	Retail
Bluestem Brands L+750 TL '20	70.75	7.75	Retail
Save-A-Lot L+600 TL B '23	56.63	7.63	Retail
Losers	**Price**	**Change**	**Industry**
Premiere Global Services L+650 TL '21	62.75	-19.75	Technology
SunGard Availability Services L+700 TL B '21	67.50	-17.00	Technology
Pier 1 Imports L+350 TL B '21	52.75	-16.87	Retail
MDA L+275 TL B '24	77.43	-14.32	Cable/Satellite
Acosta L+325 TL B '21	46.00	-14.23	Diversified Media
Accuride L+525 TL B '23	83.00	-11.67	Automotive
Key Energy L+1025 TL '21	87.00	-11.00	Energy
SunGard Availability Services L+1000 TL B '22	85.50	-10.87	Technology
Ennis-Flint L+350 TL '23	87.75	-10.75	Chemicals
J. Crew L+322 TL B '21	68.25	-10.19	Retail

Note: Largest price gainers and losers of issues in the J.P. Morgan Leveraged Loan Index, by dollar price change.
Source: J.P. Morgan.

Table 5: Second-quarter 2019 gainers and losers

Gainers	Price	Change	Industry
FHC Health Systems L+400 TL '21	99.88	17.54	Healthcare
J. Crew L+322 TL B '21	85.21	16.96	Retail
J. Crew L+300 TL B '21	85.21	16.96	Retail
High Liner Foods L+325 TL B '21	95.00	14.00	Food/Beverages
Ldiscovery L+587.5 TL '22	99.06	12.73	Technology
MDA L+275 TL B '24	90.13	12.70	Cable/Satellite
CPI Card Group L+450 TL B '22	79.00	12.55	Industrials
Akorn Inc L+700 TL B '21	92.63	11.88	Healthcare
Revlon Consumer Products L+350 TL B '23	83.29	11.18	Consumer Products
Key Energy L+1025 TL '21	98.00	11.00	Energy
Losers	**Price**	**Change**	**Industry**
Pier 1 Imports L+350 TL B '21	20.00	-32.75	Retail
PES Holdings LLC L+350 TL C '22	47.00	-30.00	Energy
Sheridan Production Partners L+550 TL B '20	57.00	-26.50	Energy
Ascena Retail Group L+450 TL B '22	64.83	-22.45	Retail
Permian Production L+600 TL B '24	75.00	-21.00	Energy
Constellis Holdings L+500 TL B '24	75.00	-20.00	Services
MCS AMS Sub-Holdings L+475 TL B '24	61.38	-18.79	Services
RentPath L+475 TL B '21	57.32	-17.35	Diversified Media
Foresight Energy L+575 TL B '22	81.17	-16.42	Metals/Mining
Murray Energy L+725 TL B '22	66.38	-15.79	Metals/Mining

Note: Largest price gainers and losers of issues in the J.P. Morgan Leveraged Loan Index, by dollar price change.
Source: J.P. Morgan.

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Table 6: Third-quarter 2019 gainers and losers

Gainers	Price	Change	Industry
Systems Maintenance Services L+500 TL B '23	80.71	12.36	Technology
Del Monte Foods Consumer Products L+325 TL '21	77.97	7.75	Food/Beverages
Diversey L+300 TL B '24	95.13	7.38	Services
RGIS Services L+750 TL '23	85.83	7.25	Services
Healthport L+425 TL B '21	91.25	7.25	Healthcare
General Nutrition L+875 TL '21	95.13	7.16	Retail
Steinhoff Mobel Holding L+280 TL B '21	86.00	7.00	Consumer Products
Montreign Resort Casino L+825 TL '23	89.54	6.54	Gaming/Lodging
Pier 1 Imports L+350 TL B '21	25.60	5.60	Retail
Aspect Software L+500 TL '24	94.25	5.58	Technology
Losers	**Price**	**Change**	**Industry**
McDermott International L+500 TL B '25	62.88	-35.39	Energy
Dayton Superior L+800 TL B '21	50.00	-30.50	Housing
Murray Energy L+725 TL B '22	36.58	-29.79	Metals/Mining
Foresight Energy L+575 TL B '22	53.00	-28.17	Metals/Mining
Permian Production L+600 TL B '24	50.00	-25.00	Energy
Lumileds L+350 TL B '24	46.96	-23.42	Technology
Exela Technologies L+650 TL B '23	61.25	-23.37	Services
Jo-Ann Stores L+500 TL B '23	68.25	-21.42	Retail
Davids Bridal L+800 TL '24	55.00	-21.00	Retail
Internap Network Services L+625 TL '22	67.00	-20.25	Technology

Note: Largest price gainers and losers of issues in the J.P. Morgan Leveraged Loan Index, by dollar price change.
Source: J.P. Morgan.

Table 7: Fourth-quarter 2019 gainers and losers

Gainers	Price	Change	Industry
Jimmy Sanders Inc L+550 TL '21	98.50	23.50	Chemicals
One Call Medical Inc L+525 TL '22	92.00	14.33	Healthcare
Ascena Retail Group L+450 TL B '22	67.28	12.16	Retail
Academy Sports and Outdoors L+400 TL B '22	81.79	12.15	Retail
Lumileds L+350 TL B '24	58.36	11.40	Technology
21st Century Oncology Inc L+612.5 TL '23	99.00	10.30	Healthcare
Del Monte Foods Consumer Products L+325 TL '21	88.00	10.03	Food/Beverages
Optiv Security L+325 TL '24	87.08	9.92	Technology
Camping World L+275 TL B '23	94.32	9.43	Retail
PETCO Animal Supplies L+325 TL B '23	84.75	9.29	Retail
Losers	**Price**	**Change**	**Industry**
Imagine! Print Solutions L+475 TL '22	34.75	-31.65	Services
Chief Power Finance L+475 TL B '20	53.08	-30.92	Utility
Rodan & Fields L+400 TL B '25	58.00	-27.00	Consumer Products
Longview Power L+600 TL B '21	53.50	-25.83	Utility
FullBeauty Brands Holding Corp L+1000 TL B '22	35.00	-25.00	Retail
American Addiction Centers L+1275 TL B '23	60.00	-22.50	Healthcare
24 Hour Fitness Worldwide L+350 TL B '25	75.36	-21.09	Gaming/Lodging
LSC Communications Inc L+550 TL B '22	63.90	-19.43	Diversified Media
Constellis Holdings L+500 TL B '24	40.00	-18.14	Services
Exela Technologies L+650 TL B '23	43.88	-17.37	Services

Source: J.P. Morgan.

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Table 8: Full-year 2019 gainers and losers

Gainers	Price	Change	Industry
PetSmart L+400 TL B '22	98.80	20.05	Retail
Jimmy Sanders Inc L+550 TL '21	98.50	18.00	Chemicals
FHC Health Systems L+400 TL '21	99.84	17.84	Healthcare
CPI Card Group L+450 TL B '22	80.00	17.20	Industrials
Lannett L+537.5 TL B '22	98.13	16.83	Healthcare
Terra-Gen Finance Co L+425 TL B '21	96.00	16.00	Utility
Academy Sports and Outdoors L+400 TL B '22	81.79	15.66	Retail
Akorn Inc L+700 TL B '21	94.83	14.21	Healthcare
Diebold L+275 TL B '23	97.50	13.50	Technology
Owens & Minor L+450 TL B '25	88.71	12.21	Healthcare
Losers	**Price**	**Change**	**Industry**
Imagine! Print Solutions L+475 TL '22	34.75	-61.25	Services
Foresight Energy L+575 TL B '22	42.64	-55.06	Metals/Mining
Constellis Holdings L+500 TL B '24	40.00	-55.00	Services
Exela Technologies L+650 TL B '23	43.88	-54.62	Services
Permian Production L+800 TL B '24	45.00	-52.00	Energy
NPC International L+350 TL '24	46.15	-47.15	Food/Beverages
Pier 1 Imports L+350 TL B '21	23.50	-46.12	Retail
American Addiction Centers L+1275 TL B '23	60.00	-39.50	Healthcare
Chief Power Finance L+475 TL B '20	53.08	-39.25	Utility
MCS AMS Sub-Holdings L+475 TL B '24	46.40	-34.97	Services

Note: Largest price gainers and losers of issues in the J.P. Morgan Leveraged Loan Index, by dollar price change.
Source: J.P. Morgan.

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New-issue review

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Institutional Leveraged Loan New-Issue Review

2019 highlights

- Institutional loan new-issue volume fell considerably in 2019, after volumes reached a record high in 2017 and the second highest annual volume in 2018. Specifically, gross loan issuance totaled $392bn in FY19, a 44% y/y decrease from 2018's volume of $704bn, which itself was down 28% from 2017's record-high volume of $974bn. Including $171bn of pro-rata loan issuance, total loan volume was $563bn.
- The decline in issuance in 2019 was largely due to a significant decrease in repricing volume, which contracted from $254bn in 2018 to a seven-year-low $61bn in 2019, a 76% y/y drop. In addition, there was also a 38% decline in acquisition financing activity, as $157bn of such deals priced versus $256bn the year prior. The decrease in activity in these two uses of proceeds accounted for nearly $300bn, whereas other uses of proceeds accounted for only $20bn less in volume y/y.
- Overall in 2019, the middle tier (Split BB or B) accounted for the majority of issuance, totaling $250.6bn (64% of YTD volume), while upper tier issuance (Split BBB or BB) totaled $122.3bn (31%) and lower-quality volume (loans rated Split B or CCC) totaled $7.4bn (2% of YTD volume).
- Second-lien volumes contracted significantly in 2019, as only $5.6bn priced during the year, down 71% from 2018's volume of $23.8bn. Second-liens now account for 4.5% of the broader institutional loan market, down from 5.2% at the end of 2018 (-13% y/y).
- European primary loan market activity decreased considerably in 2019. Specifically, European institutional loan volume totaled €40.6bn, according to S&P's Leveraged Commentary & Data Group (LCD), which was down 48% from 2018's €78.2bn of European loan volume.
- In 2019, gross CLO volume of $160.8bn was more than 40% lower than the prior year's volume of $277.6bn and 2017's record-high volume of $282.2bn, but still ranked as the third largest annual total on record. Notably, the decline in volume was due almost entirely to a significant contraction in refinancing and reset activity, as it totaled a mere $42bn in FY19, compared with totals of $147bn in 2018 and $165bn in 2017. Meanwhile, new CLO volume (ex-refi/resets) totaled $119bn in FY19, a modest -9% y/y decrease from $131bn that priced in FY18 and slightly higher than the $117bn that priced in 2017. Meanwhile, 2019 saw a slight slowdown in the Euro CLO market, although volume still ranked as the third highest total on record. Specifically, Euro CLO volume totaled €41.3bn in FY19, down slightly from €43.2bn in FY18 and €45.1bn in FY17.

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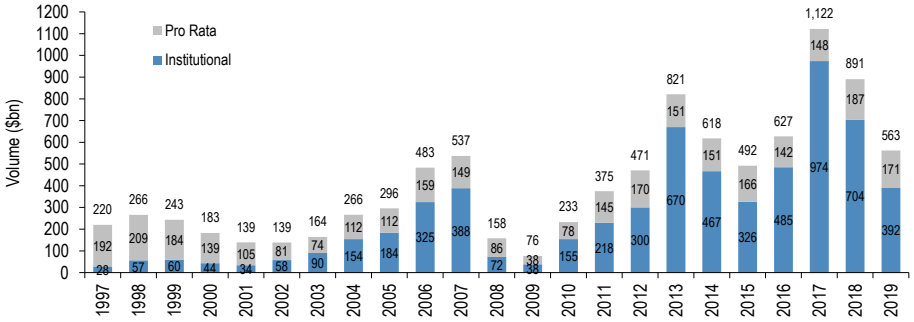
Figure 1: Annual leveraged loan volume

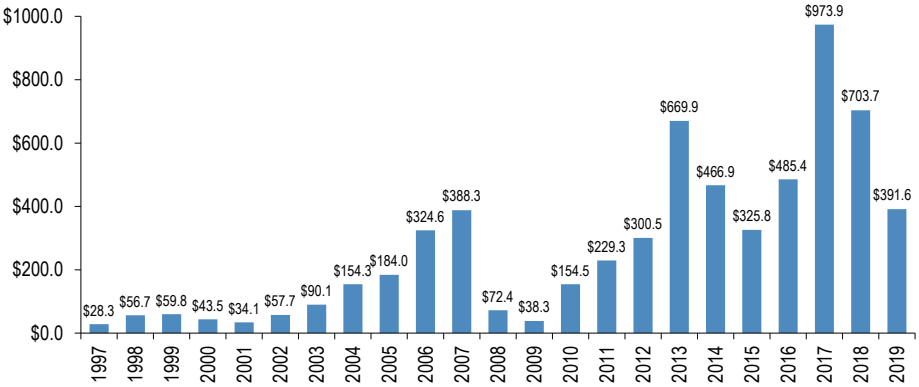


Sources: J.P Morgan; S&P LCD.

Institutional loan issuance declined 44% in 2019, registering a four-year low

Institutional loan new-issue volume fell considerably in 2019, after volumes reached a record high in 2017 and the second highest annual volume in 2018. **Specifically, gross loan issuance totaled $392bn in FY19, a 44% y/y decrease from 2018's volume of $704bn,** which itself was down 28% from 2017's record-high volume of $974bn. For context, volume totaled $485bn in 2016, $326bn in 2015, $467bn in 2014, and $670bn in 2013. Meanwhile, net volume is down as well, albeit not as much as gross issuance, with $193bn ex-refi/repricing deals issued this year as compared to $302bn in 2018 (-36%). **In addition, pro-rata loan volume totaled $171bn in 2019,** according to S&P's Leveraged Commentary & Data Group (LCD), which followed volumes of $187bn and $148bn in 2018 and 2017. This brought total loan volume (institutional plus pro-rata) to $563bn, the second lowest total since 2012, ahead of only 2015's $492bn in volume. By comparison, $891bn on combined issuance priced in 2018, a record-high $1.1trn priced in 2017, $627bn priced in FY16, $492bn priced in FY15, $618bn priced in FY14, and $821bn priced in FY13. The decline in issuance in 2019 was largely due to a significant decrease in repricing volume, which contracted from $254bn in 2018 to a seven-year-low $61bn in 2019, a 76% y/y drop. In addition, there was also a 38% decline in acquisition financing activity, as $157bn of such deals priced in 2019 versus $256bn the year prior. The decrease in activity in these two uses of proceeds accounted for nearly $300bn, whereas other uses of proceeds, which include refinancing, general corporate, and dividend deals, accounted for only $20bn less in volume y/y.

Figure 2: Institutional loan issuance fell 44% in 2019 from the second highest volume on record seen in 2018



Source: J.P. Morgan.

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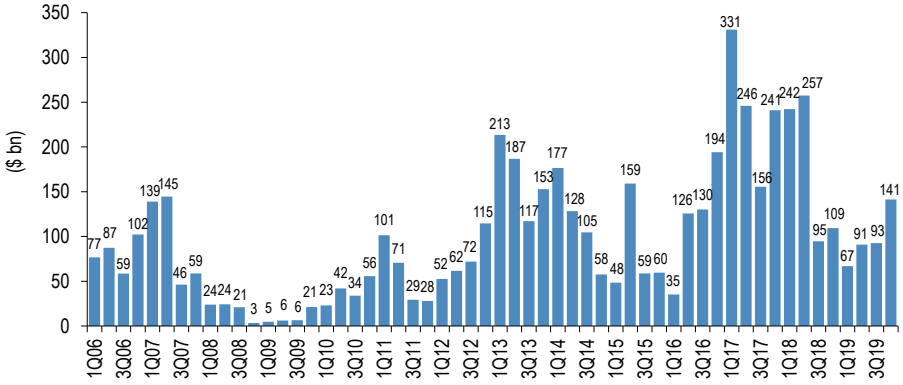
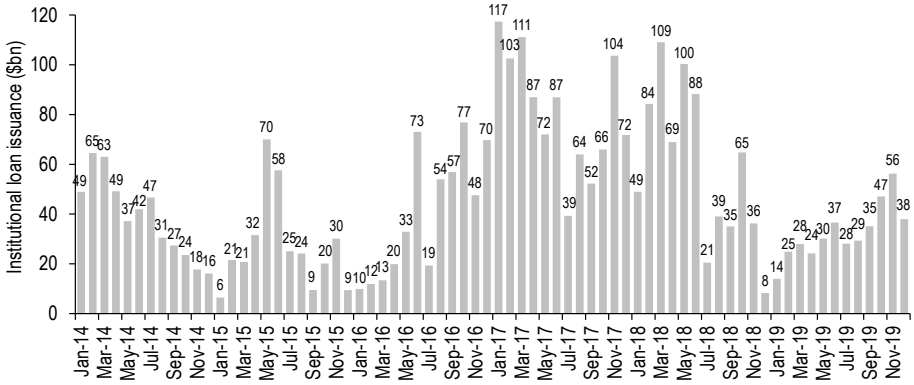
Primary institutional loan market activity started off slowly in the early months of 2019, as compared to recent years. Notably, first quarter saw only 17% of 2019's total volume, and January was the least active month during the year ($14.0bn). Specifically by quarter, loan volume totaled $66.8bn in 1Q, $90.9bn in 2Q, $92.5bn in 3Q, and $141.3bn in 4Q. By comparison, quarterly volume in 2018 totaled $242bn, $258bn, $95bn, and $109bn in quarters one through four, respectively. Meanwhile, average monthly volume totaled $32.6bn in 2019, compared with monthly averages of $58.6bn in 2018 and $81.2bn in 2017. And despite it being far lower than previous years, this number improved greatly due to heavy issuance in the 4Q. Specifically, average monthly issuance through 3Q was a mere $27.8bn per month; however, 4Q saw the three heaviest months of issuance in 2019 , an average of $47.1bn, which brought up the year's final number. Further, only two months surpassed $40bn in monthly issuance, as compared to seven in 2018. November saw the heaviest issuance, totaling $56.3bn, followed by October's volume of $47.1bn and December's volume of $38.0bn. November's YTD high was only the 30th largest monthly issuance of all time, highlighting the overall low volume of loan issuance in 2019.

Figure 3: Issuance rose significantly in the fourth quarter of 2019



Source: J.P. Morgan; S&P LCD.

Figure 4: Monthly institutional loan volumes



Source: J.P. Morgan.

The total number of deals priced also fell along with the decreased volume, as the $391.6bn of new loans were spread across 650 deals, down 46% from 2018's 1,210 deals, the third highest on record. This actually resulted in the average tranche size being greater in 2019 than in 2018. Specifically, the average tranche size of

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institutional new loans was $602mn in 2019, the third highest average on record, trailing only 2017's $684mn and 2016's $652mn, and compared with an average size of $582mn in 2018. Breaking down loan sizes further, there were 94 loans that priced in FY19 that were greater than $1bn, down from 2018's 195 such deals and 2017's 281 deals, and compared with 152 in 2016, 85 in 2015, 106 in 2014 and 183 in 2013. Further, there were 35 deals that were greater than $2bn and 14 deals greater than $3bn in 2019, well below 2018's 46 deals greater than $2bn and just below the 17 deals greater than $3bn. The largest single tranche priced in 2019 was Refinitiv U.S. Holdings' $6.5bn 1st Lien Term Loan repricing deal, followed by Restaurant Brands' $5.4bn refinancing deal and Dell Technologies' $4.8bn deal, also for refinancing. For context, other large single tranches to price over the last several years include Hilton's $7.6bn loan that priced in 2013, Burger King's $6.75bn tranche that priced in 2014, Heinz's $6.55bn tranche that priced in 2013, Refinitiv's $6.5bn deal that priced in 2018, and Charter Communication's $6.35bn tranche that priced in 2016.

Table 1: Twenty largest institutional loan new issues in 2019

Date	Issuer	Facility	Rating	Size ($mn)	Industry	UOP	Margin	Maturity	Yield
18-Dec	Refinitiv U.S. Holdings	1st Lien TL (Cov-lite)	B3/B	6,451	Services	Repricing	L+325bp	4-Oct-25	5.24%
14-Nov	Restaurant Brands International Inc	TLB (Cov-lite)	Ba3/BB	5,350	Food And Beverages	Refinancing	L+175bp	12-Nov-26	3.72%
12-Sep	Dell Technologies	TLB (Cov-lite)	Ba1/BB+	4,750	Technology	Refinancing	L+200bp	10-Sep-25	4.21%
16-Dec	Berry Global	TLY (Cov-lite)	Ba3/BB+	4,250	Paper And Packaging	Repricing	L+200bp	14-Jun-26	3.99%
17-May	Berry Global	1st Lien TL (Cov-lite)	Ba3/BB+	4,250	Paper And Packaging	Acquisition	L+250bp	15-May-26	5.09%
18-Mar	Power Solutions (Brookfield/Caisse Quebec)	1st Lien TL (Cov-lite)	B1/B+	4,200	Automotive	Acquisition	L+350bp	16-Mar-26	6.38%
21-Oct	Charter Communications	TLB	Ba2/BB+	3,804	Cable And Satellite	Repricing	L+175bp	5-Feb-27	3.85%
7-Feb	athenaHealth (VVC Holding Corp)	1st Lien TL (Cov-lite)	B3/B	3,660	Healthcare	Acquisition	L+450bp	5-Feb-26	7.73%
7-Oct	Virgin Media	TLN (Cov-lite)	Ba3/BB-	3,300	Cable And Satellite	Refinancing	L+250bp	1-Jan-28	4.72%
18-Jul	Diamond Sports Group (Sinclair Broadcast)	1st Lien TL (Cov-lite)	Ba3/BB-	3,300	Broadcasting	Acquisition	L+325bp	16-Jul-26	5.78%
7-Feb	CommScope	1st Lien TL (Cov-lite)	Ba3/BB-	3,200	Technology	Acquisition	L+325bp	5-Feb-26	6.23%
21-Nov	Level 3 Financing	TLB (Cov-lite)	Ba3/BB	3,111	Telecommunications	Refinancing	L+175bp	15-Mar-27	3.75%
16-Sep	Prime Security Services Borrower (ADT)	TLB (Cov-lite)	B1/B+	3,110	Services	Refinancing	L+325bp	11-Sep-26	5.67%
20-Jun	Nexstar Media Group	Incr. TLB-3 (Cov-lite)	B1/BB-	3,040	Broadcasting	Acquisition	L+275bp	6-Jan-24	5.26%
27-Sep	CSC Holdings/Altice USA	TLB-5 (Cov-lite)	B1/BB-	3,000	Cable And Satellite	Refinancing	L+250bp	2-May-27	4.71%
18-Mar	Travelport Worldwide	1st Lien TL (Cov-lite)	B3/B	2,800	Services	Acquisition	L+500bp	16-Mar-26	8.13%
8-Aug	DaVita	TLB	Ba2/BB	2,750	Healthcare	Refinancing	L+225bp	6-Aug-26	4.68%
14-Nov	Vistra Operations Company	TLB (Cov-lite)	Ba2/BB	2,700	Utility	Repricing	L+175bp	17-Dec-25	3.71%
18-Jun	Hilton Worldwide Holdings	TLB (Cov-lite)	Ba1/BB+	2,619	Gaming/Leisure	Refinancing	L+175bp	16-Jun-26	4.34%
13-Nov	TransUnion	TLB (Cov-lite)	Ba2/BB+	2,600	Services	Refinancing	L+175bp	11-Nov-26	3.74%
			Total:	**72,245**		**Average:**	**L+265bp**	**4-Jun-26**	**5.05%**

Source: J.P. Morgan.

Heavy retail outflows in 2019

Heavy outflows that began in 4Q18 (-$20.7bn outflow in 4Q) continued throughout 2019, with all but one week through the year reporting net outflows of capital. Specifically, loan funds reported a record outflow of $37.8bn in 2019, which followed outflows of $4.3bn reported in 2018, inflows of $13.1bn in 2017 and $9.2bn in 2016, and outflows of $21.7bn and $23.8bn in 2015 and 2014, respectively. Over the course of the year, outflows did diminish somewhat, but really were elevated across all four quarters. Specifically, first-quarter outflows totaled $11.1bn, second quarter saw $9.9bn of outflows, third quarter flows totaled -$9.4bn, and fourth quarter experienced $7.5bn of outflows. And by month, the largest outflow occurred in January (-$4.7bn), the smallest outflow occurred in December (-$1.5bn), and the full-year's monthly average was -$3.2bn.

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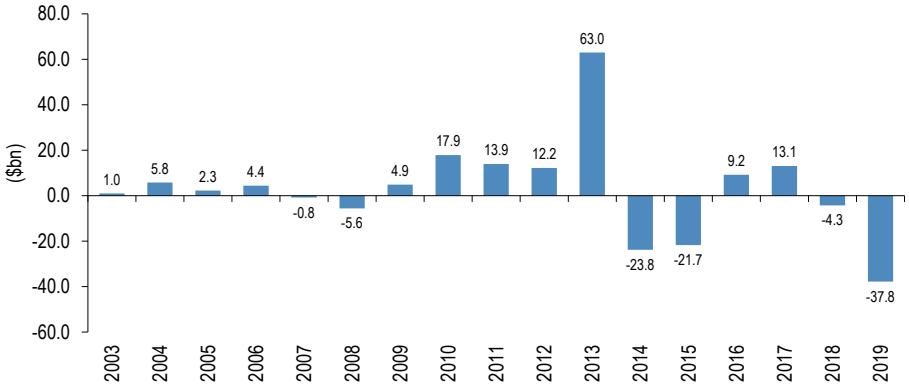
Figure 5: Retail loan fund flows

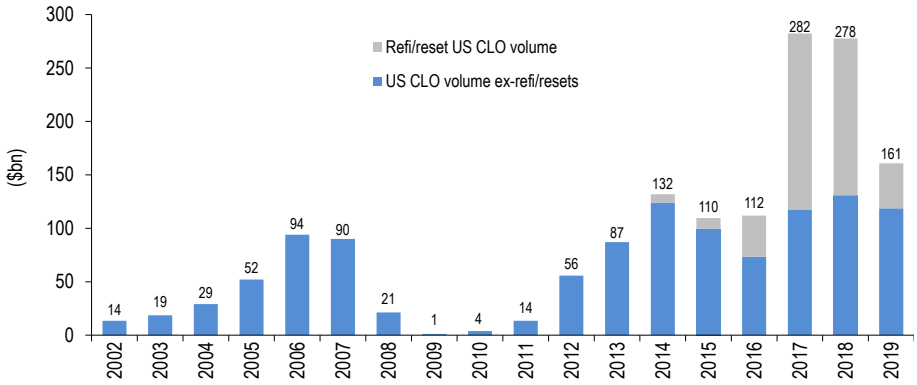


Source: Lipper FMI.

CLO volumes were low as compared to previous years

In 2019, gross CLO volume of $160.8bn was more than 40% lower than the prior year's volume of $277.6bn and 2017's record-high volume of $282.2bn, but still ranked as the third largest annual total on record. Notably, the decline in volume was due almost entirely to a significant contraction in refinancing and reset activity, as it totaled a mere $42bn in FY19, compared with totals of $147bn in 2018 and $165bn in 2017. Meanwhile, new CLO volume (ex-refi/resets) totaled $119bn in FY19, a modest -9% y/y decrease from $131bn that priced in FY18 and slightly higher than the $117bn that priced in 2017. April saw the highest monthly volume in 2019, totaling $19.3bn, whereas December saw the lightest issuance, with monthly volume totaling only $6.5bn. In comparison, 2018 included one month with volume exceeding $30bn (June: $31.1bn) and a further eight months with volume exceeding $20bn. By quarter, US CLO issuance was strongest in the 2Q ($50.4bn), whereas volume was $38.3bn in 1Q, $37.3bn in 3Q, and $34.9bn in 4Q. In comparison, 2018's heaviest quarter was 2Q ($86.6bn – a record high), and lightest quarter was 4Q ($58.5bn – still greater than 2019's highest).

Figure 6: US CLO volume declined significantly y/y, but still ranked as the third highest total on record



Source: J.P. Morgan; S&P LCD.

Trends in new-loan activity

In 2019, just above 50% of loan issuance volume was issued for repricing/refinancing activity; however, the majority of this was refinancing, as repricing activity took a significant step back during the year. Further, acquisition

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financing led the way in terms of use of proceeds for a second consecutive year and accounted for a larger portion of this year's issuance as compared to last year. General corporate activity and dividend deals were low once again. By rating, Split-B/CCC rated volumes were higher than the previous year, but continued to be dwarfed by their higher rated counterparts. In addition, second lien volume dropped drastically in 2019, pricing a nine-year low in volume and accounting for a mere 1.5% of the market's total issuance. Finally, cov-lite issuance decreased y/y, but that was because of the overall decline in primary market activity, as cov-lite issuance as a percent of total issuance was over 80% for a second consecutive year.

Table 2: Percentage of new-loan volume by various categories

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Use of proceeds												
Repricing	0.0%	0.0%	0.0%	0.1%	12.4%	36.1%	19.4%	19.5%	28.3%	45.2%	36.0%	15.5%
Refinancing	10.8%	45.2%	34.7%	58.8%	42.2%	35.1%	28.0%	22.3%	36.8%	28.3%	21.1%	35.5%
Acquisition finance	74.1%	29.2%	39.6%	31.9%	29.4%	20.7%	41.0%	49.0%	28.8%	21.9%	36.3%	40.2%
General corporate	4.7%	4.0%	0.9%	1.1%	1.2%	1.9%	1.3%	1.3%	0.9%	1.2%	1.2%	3.0%
Dividend-payout	3.0%	2.0%	11.9%	6.5%	12.7%	5.3%	6.6%	6.1%	3.3%	1.9%	4.4%	4.4%
Rating												
BB-rated	32.5%	26.1%	17.7%	14.7%	17.0%	14.7%	12.9%	22.8%	22.5%	23.1%	21.4%	29.9%
B-rated	13.6%	26.3%	57.8%	62.7%	65.8%	67.1%	69.7%	64.0%	58.1%	61.1%	64.8%	55.7%
Split B/CCC-rated	1.3%	8.2%	0.9%	1.8%	1.6%	2.4%	2.0%	0.7%	0.9%	1.2%	0.2%	1.9%
Other												
Second lien	4.1%	3.9%	2.7%	3.0%	4.8%	5.0%	7.9%	3.9%	2.7%	3.0%	3.4%	1.4%
Cov-lite	3.5%	6.5%	4.7%	24.3%	33.4%	50.5%	66.3%	71.8%	74.4%	78.6%	87.0%	81.6%

Sources: J.P Morgan; S&P LCD.

Repricing and refinancing activity: About 51% of 2019's volume was issued for refinancing and repricing activity, down from 2018's 57%; however, the majority of this activity was due to refinancing, as repricing volume took a significant step back during the year. Specifically, refinancing volume totaled a four-year-low $139bn in 2019, which followed volumes of $148bn in 2018, a record-high $275bn in 2017, and $179bn in 2016. Refinancing activity started the year slowly with only $14bn pricing in 1Q, but volumes increased to a heavier $37bn and $38bn in quarter's two and three, before jumping to $50bn in the year's final quarter. Meanwhile, repricing volume totaled $60.5bn in 2019, which was down -76% from 2018's total of $254bn and paled in comparison to 2017's record repricing volume of $440bn. Notably, 2019's repricing issuance was a seven-year low, with 2012's $37bn of repricing volume the last time such issuance was so modest. Repricing activity was actually non-existent for most of the year, with a mere $7.7bn pricing across the year's first nine months. In the fourth quarter, $52.8bn of repricing volume was issued, which accounted for 87% of the year's total repricing volume.

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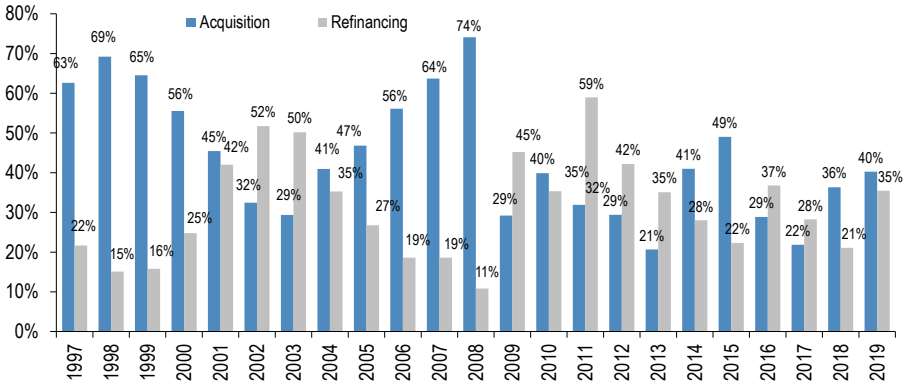
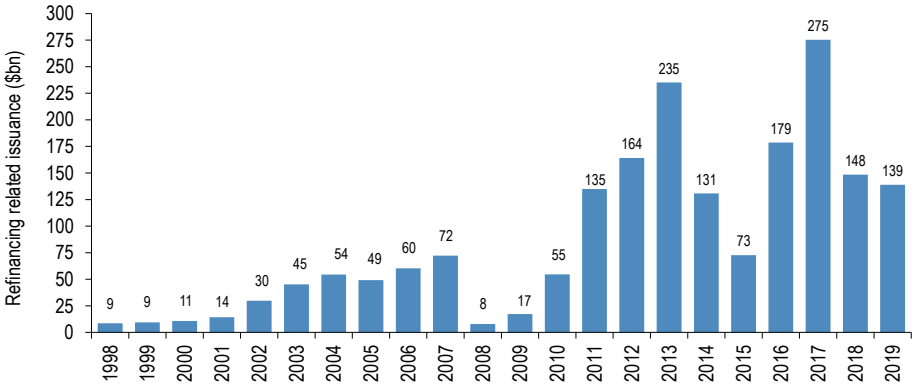
Figure 7: Use of proceeds for institutional loan issuance



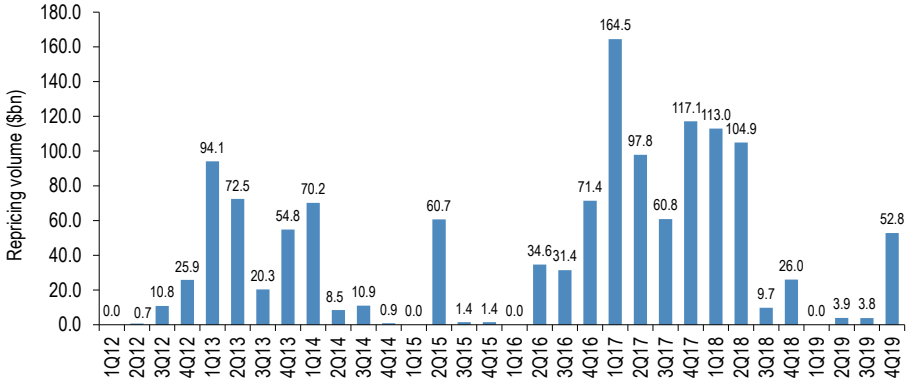
Source: J.P. Morgan.

Figure 8: Refinancing activity decreased to a four-year low



Sources: J.P Morgan; S&P LCD.

Figure 9: Repricing activity remained quiet through the first three quarters, but surged in 4Q19



Source: J.P. Morgan.

Acquisition financing and LBOs: Although acquisition financing fell relative to 2018 in terms of volume, it accounted for a higher portion of the annual issuance in 2019. Specifically, $157.6bn was priced to finance acquisitions, accounting for 40% of total volume, as compared to 2018's record high of $255.7bn (36% of total volume). More specifically, LBO related new issue activity in 2019 totaled $83.9bn, down 36% from 2018's $130bn and also below 2017's $98bn. For historical context,

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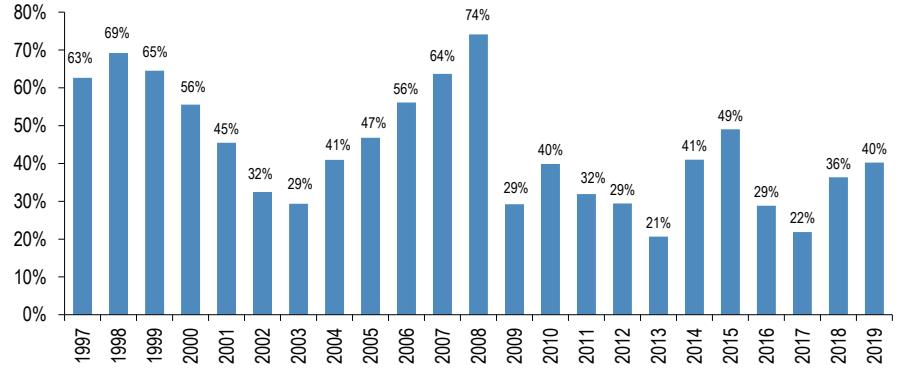
more than $240bn of institutional loans were issued to finance LBOs during 2006 and 2007.

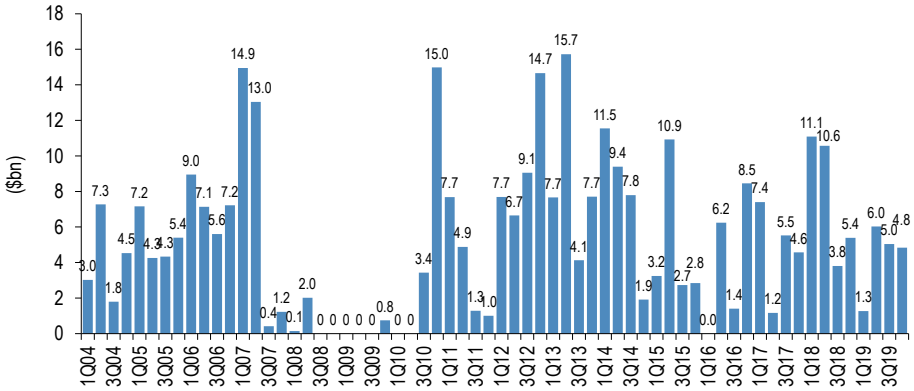
Figure 10: Acquisition financing related new loan volume



Source: J.P. Morgan.

Dividend deals: Dividend related loan issuance fell from 2018's volume, which was the third largest dividend issuance post crisis, but accounted for roughly the same percentage of total issuance as the previous year. Specifically, the institutional loan market funded $17.2bn of dividend deals (4.4% of total issuance), down from $30.9bn in 2018 and comparable to 2017's volume of $18.7bn. For context, $35.2bn of loan volume was used to fund dividends in 2013 (5.3%), and a record high $38.1bn (12.7%) in 2012. Meanwhile, the high-yield bond market funded merely $2bn in dividend deals in 2019, which, combined with loan deals, totaled $19.2bn of dividend related issuance across the leveraged finance market. This compares to a total of $34.3bn of dividend related issuance in 2018.

Figure 11: Quarterly dividend activity



Sources: J.P Morgan; S&P LCD.

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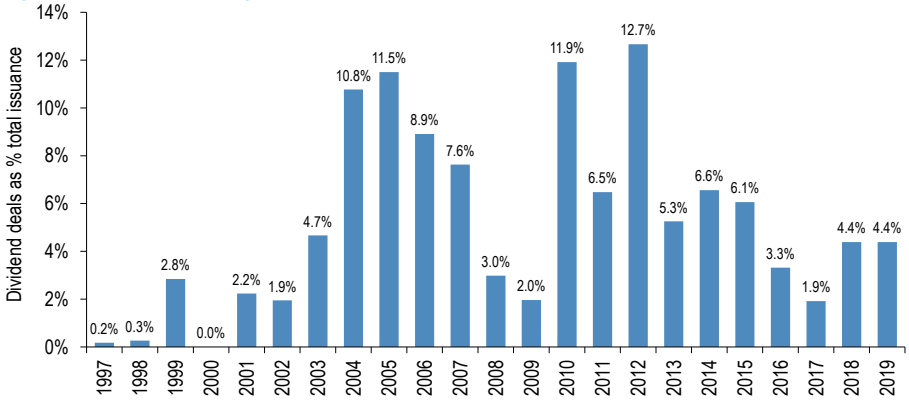
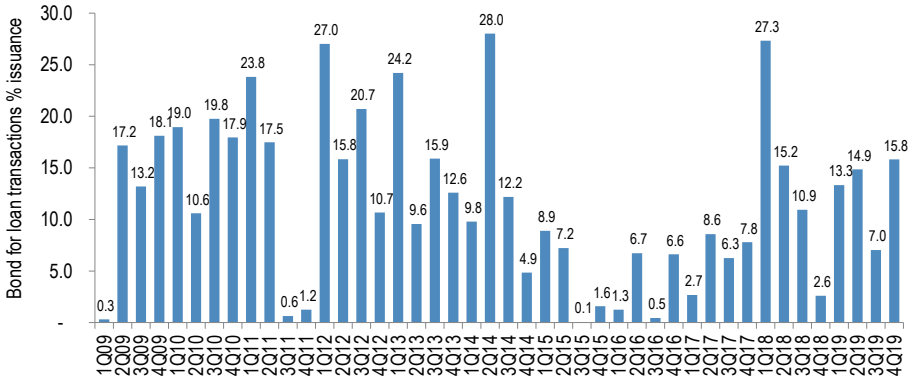
Figure 12: Dividend activity as a percent of total institutional loan issuance



Sources: J.P Morgan; S&P LCD.

Bond-for-loan deals: Over the past few years, loan issuers used the bond market to refinance loans, leading to a number of bond-for-loan transactions. Such transactions in 2019 decreased to $51.0bn from 2018's volume of $56.1bn, still nearly double 2017's $25.3bn and well above 2015 and 2016 volumes of $15.1bn and $17.8bn, respectively, but below the levels reached in 2014 ($54.8bn), 2013 ($62bn) and 2012 ($78bn: record high). By quarter, bond-for-loan volumes totaled $13.3bn in 1Q, $14.9bn in 2Q, $7.0bn in 3Q, and $15.8bn in 4Q.

Figure 13: Quarterly bond-for-loan activity



Source: J.P. Morgan.

Lower-tier volume: Overall in 2019, the middle tier (Split BB or B) accounted for the majority of issuance, totaling $250.6bn (64% of YTD volume), while upper tier issuance (Split BBB or BB) totaled $122.3bn (31%) and lower-quality volume (loans rated Split B or CCC) totaled $7.4bn (2% of YTD volume). For context, $513.3bn (73%) of FY18's volume was middle-tier, while FY18 totals for upper-tier and lower-tier issuance were $171.2bn (24.3%) and $1.2mn (<1%), respectively. Non-rated loan volume totaled $11.3bn in 2019 (2.9% of total volume), compared with $18.0bn in 2018 (2.6%).

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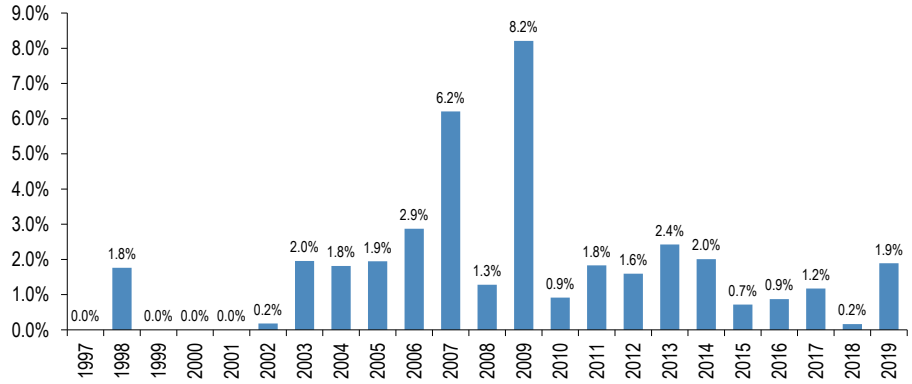
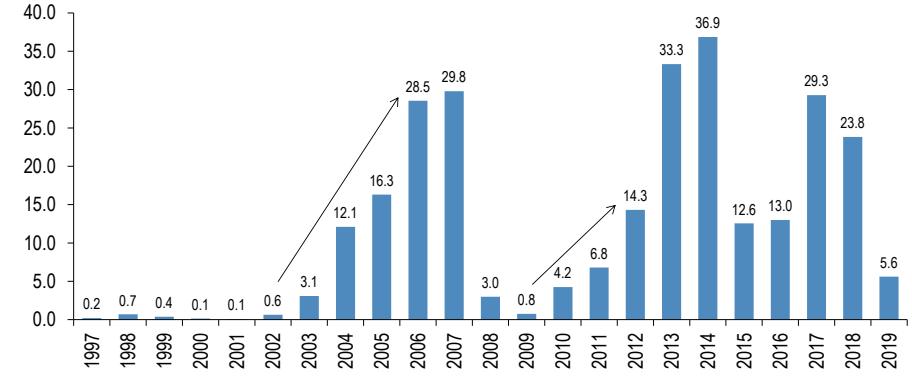
Figure 14: Loan issuance rated split-B or CCC



Source: J.P. Morgan.

Second-lien loans: Second-lien volumes contracted significantly in 2019, as only $5.6bn priced during the year, down 71% from 2018's volume of $23.8bn. For context, volumes reached $29.3bn in 2017, just shy of record highs of $36.0bn in 2014 and $33.3bn in 2013, while 2007 and 2006 also saw heavy second-lien volumes of $29.8bn and $28.5bn, respectively. Second-lien issuance was light throughout the year, with $1.4bn pricing in 1Q, $2.2bn in 2Q, $1.0bn in 3Q and $1.0bn in 4Q. Second-liens now account for 4.5% of the broader institutional loan market, based on the market value outstanding of the J.P. Morgan Second Lien Loan Index as a percent of the combined market value outstanding of the second lien index and the J.P. Morgan Leveraged Loan Index, down from 5.2% at the end of 2018 (-13% y/y) and from 7.5% just five years ago.

Figure 15: Annual volume of second lien loans



Sources: J.P Morgan; S&P LCD.

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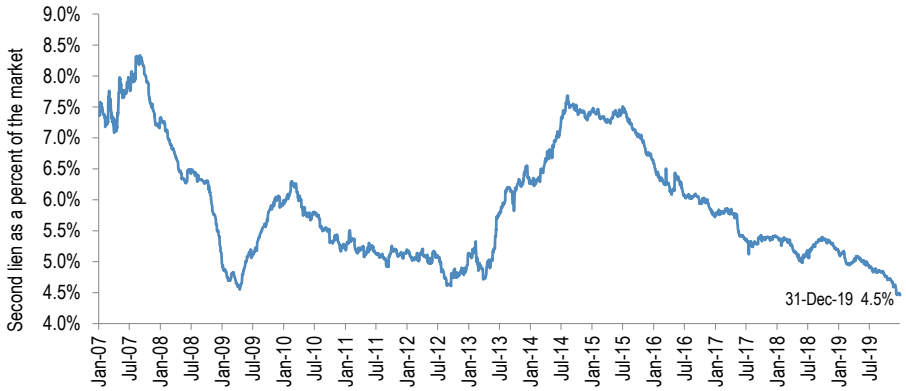
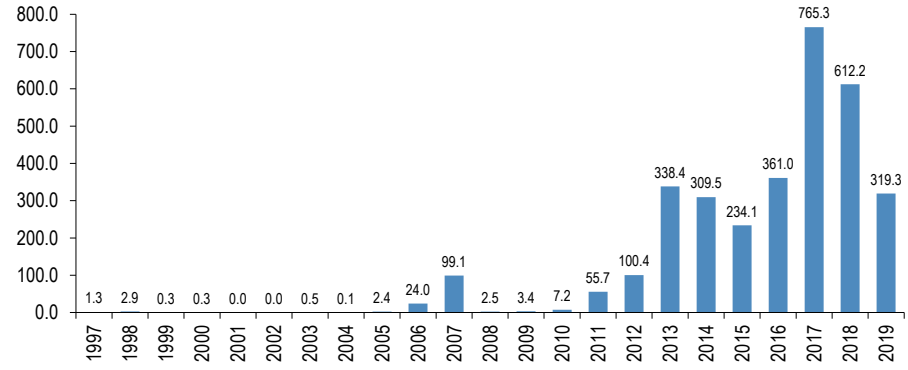
Figure 16: Second lien loans as a percent of the institutional loan market continues to decline



Source: J.P. Morgan.

Covenant-lite: Cov-lite issuance in 2019 decreased y/y in terms of volume and percentage of total volume, but was still at the second highest percentage of total volume on record and marked the sixth time over the last seven years that volume exceeded $300bn. Specifically, covenant-lite deals totaled $319bn in 2019, roughly 50% below last year's volume of $612bn. For context, cov-lite volume totaled $765bn (record high) in 2017, $361bn in 2016, $234bn in 2015 and $309bn in 2014. However, as a percentage of total volume, cov-lite issuance accounted for 81.6% of the total volume in 2019, down from a record high of 87% in 2018, but above previous highs of 78.6% in 2017 and 74.4% in 2016. By quarter, cov-lite activity totaled $52.4bn in 1Q, $73.0bn in 2Q, $80.0bn in 3Q, and $113.9bn in 4Q. Covenant-lite loans currently account for 83.7% of the outstanding loan universe, as measured by the J.P. Morgan Leveraged Loan Index, up 2% from year-end 2018's 81.8%. Interestingly, cov-lite loans in our index currently carry an average yield to 3-year takeout of 6.00%, 184bp below the percent of the index that is not cov-lite (7.84%), as the market seemingly perceives the majority of these corporations afforded these terms to be credit worthy.

Figure 17: Covenant-lite loan volume greater than $300bn for the sixth time over the last seven years



Source: J.P. Morgan, S&P/LCD.

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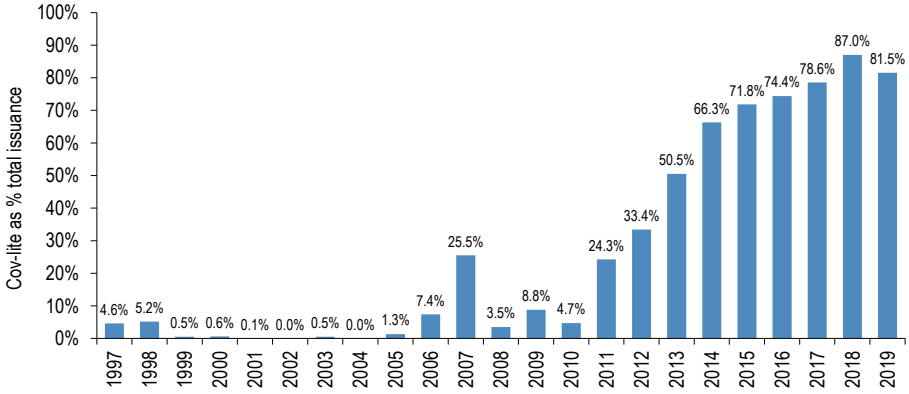
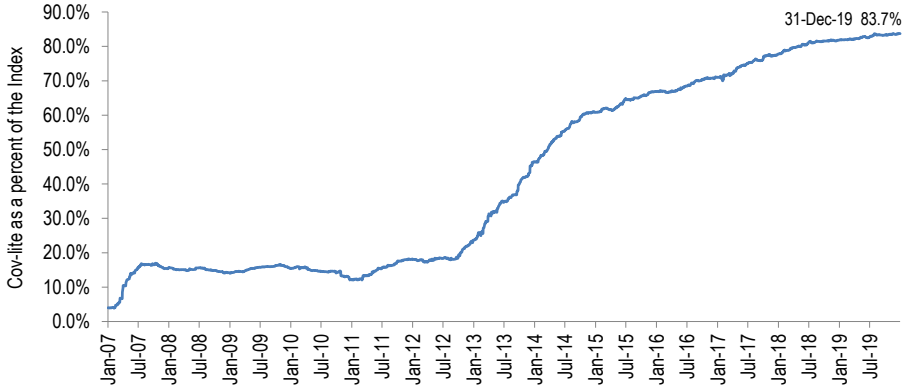
Figure 18: Cov-lite as a percent of total issuance



Source: J.P. Morgan, S&P/LCD.

Figure 19: Covenant-lite loans account for more than three quarters of the J.P. Morgan Leveraged Loan Index



Source: J.P. Morgan.

Industry: The Services sector led the market in volume of new loans with $53.6bn, or 13.7% of total issuance, pricing over the course of the year. For context, the Technology sector funded $119.8bn (17%), $162.4bn (17%), $92.9bn (19%) and $52.8bn (16%) of new loans in FY18, FY17, FY16, and FY15, respectively, as it led issuance in those respective years. Technology came in second in 2019 with $48.4bn of new loans pricing, which accounted for 12.4% of the year's activity, followed by Healthcare, which totaled $39.8bn in volume and accounted for 10.2% of total issuance. Metals/Mining saw extremely low levels of new-issue volume in 2019, with only $322mn pricing throughout the year, while Consumer Products saw the second least new issue volume ($5.9bn).

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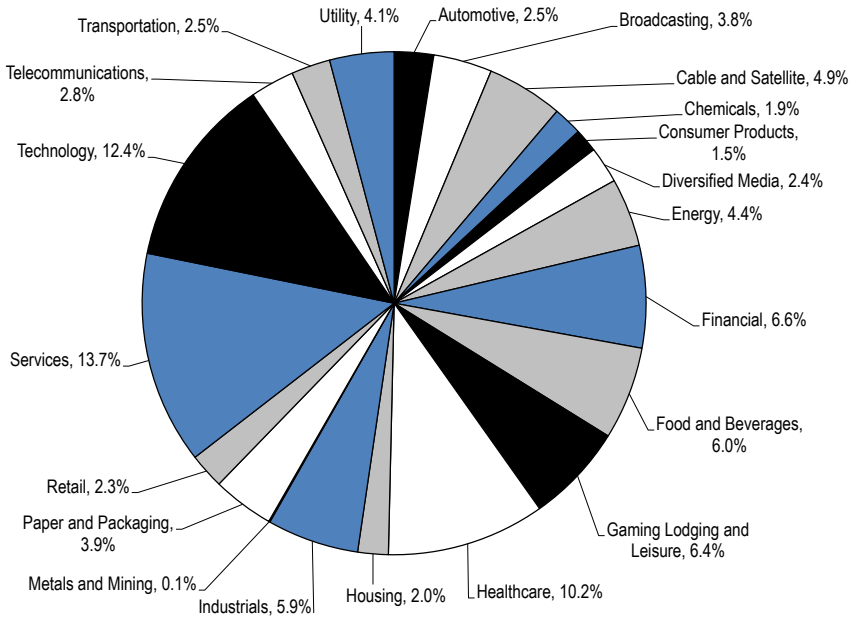
Figure 20: Percent of new issues by industry
By par amount



Sources: J.P Morgan; S&P LCD.

Table 3: Percent of new issues by industry
By par amount

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change 2018 to 2019
Automotive	3.0%	3.7%	1.4%	4.0%	2.2%	2.3%	5.1%	1.6%	1.1%	2.6%	2.6%	2.5%	0.0%
Broadcasting	7.2%	1.8%	1.5%	2.8%	1.5%	2.7%	2.0%	0.4%	1.7%	1.6%	0.3%	3.8%	3.5%
Cable and Satellite	2.6%	5.4%	3.5%	2.1%	5.0%	3.6%	1.7%	5.0%	6.0%	2.1%	0.3%	4.9%	4.6%
Chemicals	8.1%	17.9%	3.6%	4.3%	3.5%	3.3%	4.4%	4.0%	4.2%	3.8%	4.0%	1.9%	-2.2%
Consumer Products	0.7%	4.4%	5.1%	3.3%	3.8%	2.8%	2.2%	4.7%	5.2%	4.4%	7.9%	1.5%	-6.4%
Diversified Media	4.4%	3.5%	2.0%	1.4%	2.8%	2.7%	4.7%	3.5%	3.3%	2.3%	3.3%	2.4%	-1.0%
Energy	7.9%	4.7%	2.6%	4.2%	6.5%	4.1%	5.2%	2.5%	1.0%	1.8%	3.3%	4.4%	1.1%
Financial	0.4%	2.1%	6.8%	7.2%	5.2%	5.3%	2.8%	3.8%	3.1%	6.4%	6.6%	6.6%	-0.1%
Food and Beverages	5.6%	9.0%	7.7%	5.9%	3.9%	5.4%	4.3%	2.9%	1.9%	2.2%	0.5%	6.0%	5.5%
Gaming/Lodging/Leisure	7.4%	6.7%	6.1%	4.4%	5.1%	6.6%	6.3%	3.3%	6.4%	8.2%	9.0%	6.4%	-2.6%
Healthcare	5.5%	10.5%	13.1%	15.0%	13.1%	11.8%	12.8%	15.4%	9.8%	9.9%	11.5%	10.2%	-1.3%
Housing	1.2%	1.2%	1.0%	0.5%	1.5%	1.1%	1.3%	2.0%	2.4%	2.1%	2.5%	2.0%	-0.6%
Industrials	5.9%	1.1%	8.0%	6.8%	6.8%	6.4%	5.5%	3.7%	5.4%	5.9%	7.1%	5.9%	-1.2%
Metals and Mining	1.1%	1.5%	1.7%	2.2%	3.4%	2.0%	0.7%	1.2%	0.3%	0.8%	1.1%	0.1%	-1.0%
Paper and Packaging	4.4%	3.2%	2.3%	2.4%	2.5%	1.7%	2.2%	3.4%	3.5%	2.4%	2.2%	3.9%	1.7%
Retail	2.8%	3.3%	4.4%	7.1%	5.8%	6.6%	6.0%	10.5%	8.8%	2.4%	1.7%	2.3%	0.6%
Services	**7.3%**	**7.5%**	**13.4%**	**8.0%**	**9.2%**	**11.3%**	**12.5%**	**6.4%**	**9.5%**	**10.5%**	**9.2%**	**13.7%**	**4.5%**
Technology	**12.4%**	**6.3%**	**9.0%**	**11.5%**	**10.8%**	**11.1%**	**11.4%**	**16.2%**	**19.1%**	**16.7%**	**17.0%**	**12.4%**	**-4.7%**
Telecommunications	4.2%	4.4%	4.7%	3.3%	3.6%	3.5%	3.1%	5.2%	2.0%	7.1%	4.7%	2.8%	-1.9%
Transportation	2.5%	1.1%	0.6%	1.5%	2.1%	2.4%	2.0%	2.9%	1.6%	2.5%	2.2%	2.5%	0.3%
Utility	5.3%	0.8%	1.7%	2.1%	1.7%	3.5%	3.8%	1.4%	3.7%	4.1%	2.9%	4.1%	1.2%

Sources: J.P Morgan; S&P LCD.

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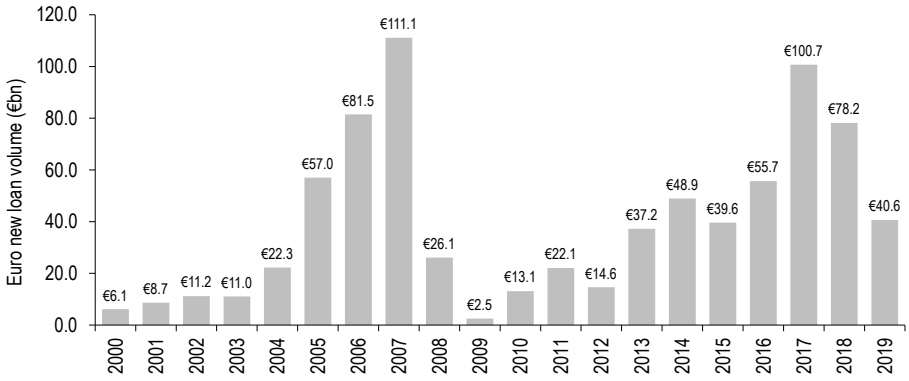
European loan issuance and CLO activity

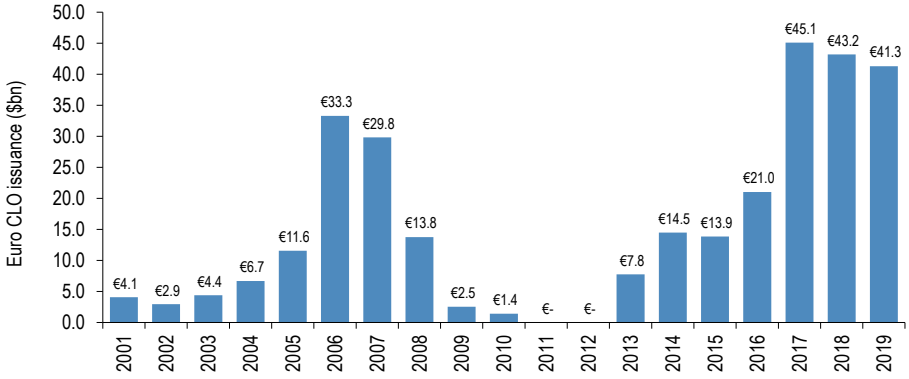
European primary loan market activity decreased considerably in 2019. Specifically, European institutional loan volume totaled €40.6bn, according to S&P's Leveraged Commentary & Data Group (LCD), which was down 48% from 2018's €78.2bn of European loan volume. For context, 2017 volume of €100.7 ranked as the second highest total on record and 2018 volume ranked fourth, with 2007 and 2006 volumes of €111bn and €82bn ranking first and third, respectively. Meanwhile, 2019 saw a slight slowdown in the Euro CLO market, although volume still ranked as the third highest total on record. Specifically, Euro CLO volume totaled €41.3bn in FY19, down slightly from €43.2bn in FY18 and €45.1bn in FY17. In the ten years preceding these last three years of elevated activity, Euro CLO volume had never topped €33.3bn and in fact averaged a modest €10.5bn per year over the previous 16-year span. Notably, new Euro CLO volumes increased slightly throughout the year, as quarterly volume totaled €7.7bn in 1Q19, €10.1bn in 2Q19, €11.5bn in 3Q19, and €12.7bn in 4Q19. For context, quarterly volumes totaled €10.5bn in 1Q18, €12.2bn in 2Q18, €12.2bn in 3Q18, and €8.4bn in 4Q18.

Figure 21: Euro new loan volume was down 48% y/y



Source: S&P LCD.

Figure 22: Euro CLO volume declined y/y but still was the third highest volume on record



Sources: J.P Morgan; S&P LCD.

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Event risk

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Event risk in the high-yield market

2019 highlights

- **Defaults** - Default activity was higher for a second consecutive year in 2019, with volume ranking as the seventh highest annual total on record. Notably, the increase in activity was due largely to elevated activity in the commodities sectors, as Energy and Metals/Mining accounted for essentially half of the years defaults/distressed activity. Overall, 43 companies defaulted in 2019, with debt totaling $51.5bn in bonds and loans, while an additional ten companies completed distressed exchanges totaling $7.8bn. By comparison, 32 companies totaling $43.1bn defaulted or completed a distressed exchange in FY18 and 47 companies totaling $36.8bn were affected in FY17.
- **Default rates** - The par-weighted loan default rate ended 2019 at 1.64%, decreasing 8bp over the course of the year and remaining well below the long term average default rate of 3.01%. The default rate including distressed exchanges is 2.06%. Meanwhile, the par-weighted US high-yield default rate ended 2019 at 2.63%, up +80bp y/y and below the long term average rate of 3.44%. Including distressed exchanges, the US high-yield default rate ended December at 2.86%. Notably, the par-weighted high-yield bond and loan default rates ex-commodities and including distressed exchanges ended the year at much more modest levels of 1.26% (vs 2.86%) and 1.39% (vs 2.06%), respectively.
- **Defaults by industry** - The Energy sector accounted for a market-leading 21 defaults/distressed transactions in 2019 (40% of the 53 default actions). And its $26.1bn of default volume accounted for 44% of total volume, also the highest percentage of any industry. For context, the Energy sector's combined bond and loan default rate ended the year at 11.8%, up from 3.14% in 2017 and 2.68% in 2018, but still below the 14.2% rate in 2016.
- **Pay downs and repayment rates** - Institutional loan pay downs increased in 2019, coming in as the fourth largest annual total on record. Specifically, $255bn was paid down during the year, compared with $241bn in 2018 and a record-high $345bn in 2017. With the US institutional loan market size of roughly $1.2trn, this translated into a repayment rate of 22%, the lowest rate since it was 21% in 2015 and compared with the 20-year average of 33%.
- **Upgrades and downgrades** – In 2019, 138 loan borrowers totaling $130bn were upgraded, and 355 borrowers totaling $305bn were downgraded. This translated to an upgrade-to-downgrade ratio by borrower of 0.39:1 and by dollar volume of 0.43:1, down from 2018's ratios of 0.63:1 and 0.68:1.

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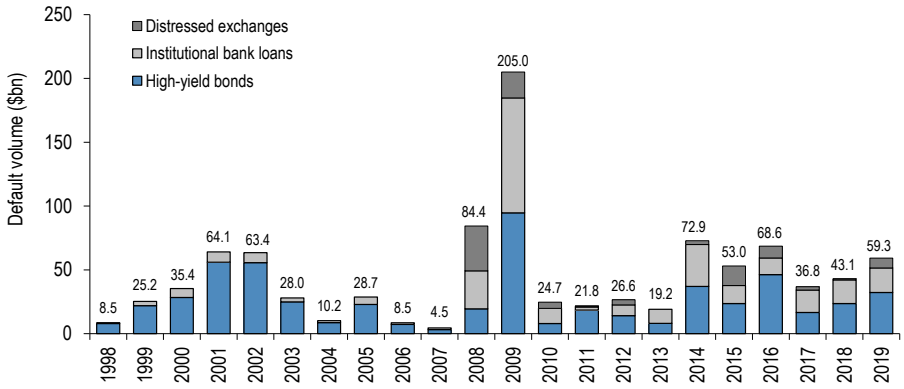
Defaults and recovery rates

Default activity was higher for a second consecutive year in 2019, with volume ranking as the seventh highest annual total on record. Notably, the increase in activity was due largely to elevated activity in the commodities sectors, as Energy and Metals/Mining accounted for essentially half of the year's defaults/distressed activity. Specifically, Energy and Metals account for 47% of all default actions in 2019 and 52% of total volume affected. For historical context, commodity defaults were last elevated in 2015 and 2016, when $33bn (65% of total volume) and $55bn (80%) defaulted, which were followed by much more modest activity in 2017 and 2018, with $8.7bn (24%) and $7.7bn (18%) of commodity related defaults occurring. **Overall, 43 companies defaulted in 2019, with debt totaling $51.5bn in bonds and loans, while an additional ten companies completed distressed exchanges totaling $7.8bn.** By comparison, 32 companies totaling $43.1bn defaulted or completed a distressed exchange in FY18 and 47 companies totaling $36.8bn were affected in FY17. For further context, default/distressed exchange volume totaled $68.6bn in FY16 (fourth highest on record), $53.0bn in FY15, $72.9bn during FY14 (third highest), $19.2bn during FY13, $26.6bn in FY12, $21.8bn in FY11, and $24.7bn in FY10. And, a record $205bn of bond and loan volume defaulted or completed a distressed exchange in 2009 and $84.4bn was affected in 2008 (second highest); 2001 and 2002 volume of $64.1bn and $63.4bn, respectively, rank as the fifth and sixth highest totals.

Figure 1: Annual default and distressed exchange volume



Source: J.P. Morgan.

Defaults in FY19 were made up of sixteen companies with only bonds outstanding, eleven companies with both bonds and loans, and sixteen loan-only borrowers, or 27 bond defaults versus 27 loan defaults. Notably, bond and loan defaults were skewed more toward the bond market in 2018, with 16 bond-only defaults, 5 loan-only defaults, and 9 defaults in which the company had both bonds and loans outstanding, or 25 bonds defaults versus 14 loan defaults. **By volume, bond defaults totaled $32.3bn (63%) and loan defaults totaled $19.2bn (37%) in 2019.** For context, bond defaults totaled $23.6bn (56%) in FY18, compared with $18.5bn (44%) for loan defaults. Notably, bond default volume has outpaced loan default volume in five of the last six years by a combined $65.8bn, with the one exception being 2017, when loan default volume was $795mn higher than bond default volume. **Most notably, the 27 loan defaults were the most in a calendar year since 31 loan borrowers defaulted in 2010 and the $19.2bn of affected loan volume was the most since $32.8bn defaulted in 2014.**

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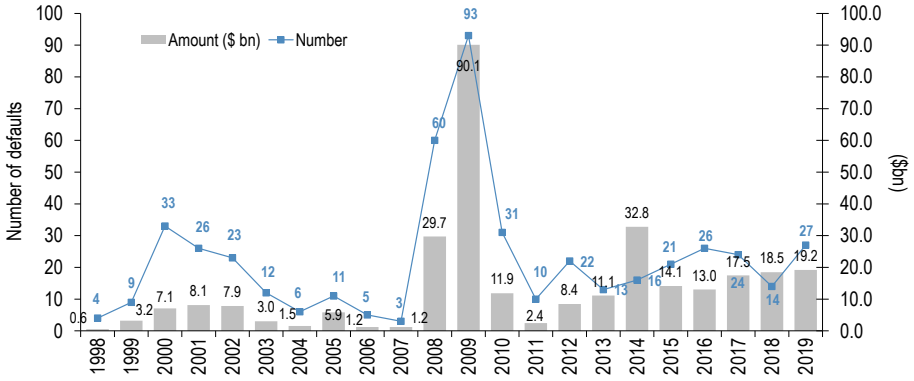
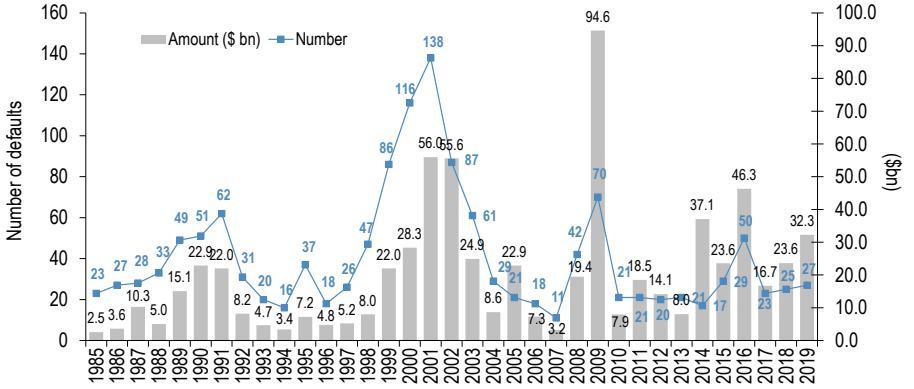
Figure 2: Annual number and dollar volume of institutional loan defaults



Source: J.P. Morgan.

Figure 3: Annual number and dollar volume of high-yield bond defaults



Source: J.P. Morgan.

Meanwhile, distressed exchange activity played a larger role in the default environment after two consecutive years of modest activity. **Specifically, there were ten distressed exchanges totaling $7.8bn in bonds ($2.9bn) and loans ($4.9bn), compared with only two distressed transactions in 2018 totaling $994mn and ten distressed transactions totaling $2.6bn in 2017.** Further, there were 28 distressed transactions totaling $9.2bn in FY16 and 31 distressed exchanges totaling $15.3bn in FY15.

The par-weighted US high-yield default rate ended 2019 at 2.63%, down -2bp m/m, up +168bp since the YTD-low 0.95% in March, and up +80bp y/y. Notably, the default rate is just off last month's 33-month high (2.83% in February 2017). Despite the y/y increase, the default rate remains low in a historical context, as high-yield's long term average default rate is 3.44%, based on annual default rates back to 1980. **Including distressed exchanges, the US high-yield default rate ended December at 2.86%, down -9bp m/m and up +98bp y/y.** And the issuer weighted high-yield default rate ended the year at 3.15%, compared with 2.78% at YE18. **For loans, the par-weighted default rate ended 2019 at 1.64%. The default rate decreased 13bp m/m and is now 8bp lower from where it began the year.** Similar to the bond default rate, the loan rate is also low from a historical context, as the long term average loan default rate is 3.01%, based on annual default rates back to 1998. **The default rate including distressed exchanges is 2.06% (-13bp m/m and +31bp y/y).** And the issuer-weighted loan default rate ended December at 1.96%, unchanged

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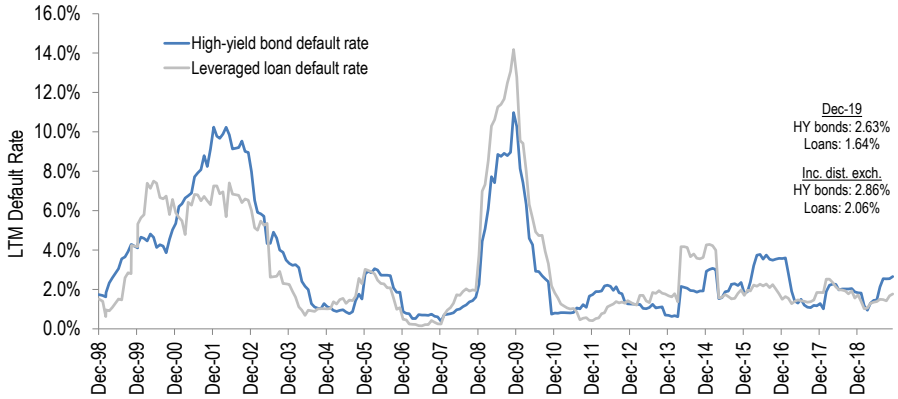
m/m and up 87bp from 1.09% from twelve months prior. **Notably, the par-weighted high-yield bond and loan default rates ex-commodities and including distressed exchanges ended the year at much more modest levels of 1.26% (vs 2.86%) and 1.39% (vs 2.06%), respectively.** Finally, the leveraged credit default rate, which combines bonds and loans, increased 37bp during 2019 to 2.15%.

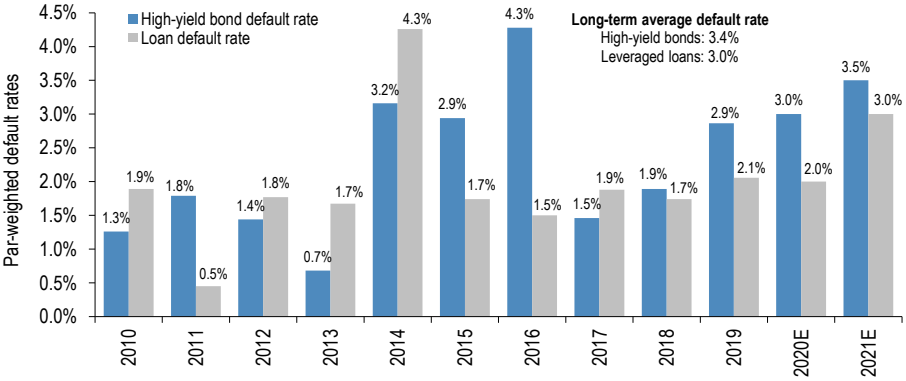
Figure 4: High-yield bond and loan default rates



Source: J.P. Morgan.

Going forward, we see very little reason to expect much of a pickup in default activity for the foreseeable future. Only a modest erosion in credit fundamentals across most sectors and the past few years' heavy pace of refinancing have balance sheets in a solid position, in our view. Meanwhile, capital markets should remain highly accessible in 2020 with the drag from global trade receding, US economic growth expected to stabilize, and monetary policy to remain on hold. That said an expected year-over-year decline in Energy defaults is likely to be replaced by the filing of one (or more) large distressed situations. Therefore **we are forecasting an unchanged HY bond and loan default rate of 3.0% and 2.0% in 2020, which we expect will rise to 3.5% and 3.0% in 2021 as the cycle matures and more Energy defaults surface.**

Figure 5: Default rates expected to remain modest over next two years



Source: J.P. Morgan.

Default activity (both number and volume) was heavier in the year's second half. **Specifically, there were 21 defaults totaling $21.8bn during the first six months of 2019 (an average of 3.5 defaults and $3.6bn per month), compared with 22 defaults totaling $29.7bn from July through December (an average of 3.7**

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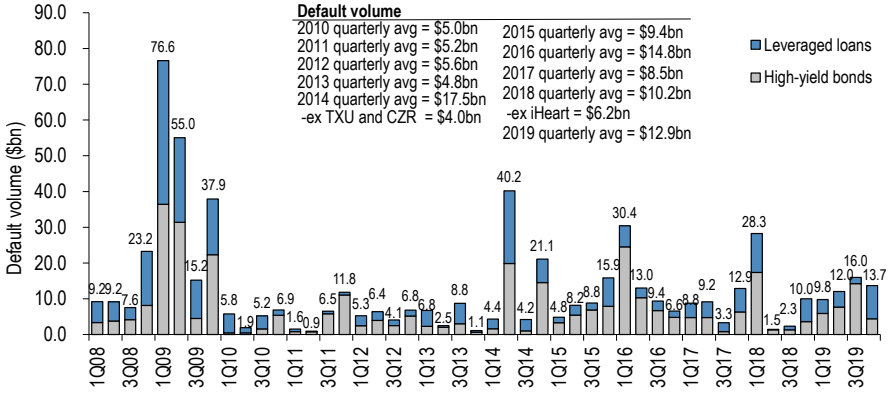
defaults and $4.9bn per month). For context, default activity in terms of both volume and number of defaults was more prevalent during the first half of the year in 2018, with 17 defaults totaling $29.7bn in the first half and 13 defaults totaling $12.4bn in the second half. **By quarter, 3Q saw the most default volume in 2019 with $16.0bn affected, which was the eleventh highest total on record and highest since 1Q18.** This was followed by 4Q with $13.7bn defaulted, 2Q with $12.0bn, and finally 1Q with $9.8bn. In 2018, the first quarter's default total of $28.3bn was easily the largest quarterly total during the year and the sixth largest total on record, followed by $10.0bn in 4Q, $2.3bn in 3Q, and $1.5bn in 2Q. By number of defaults, 10 companies defaulted in 1Q19, followed by 11, 9, and 13 in 2Q, 3Q, and 4Q, respectively.

Figure 6: Quarterly default volume



Source: J.P. Morgan.

Overall, the average size of defaults in 2019 was $1.2bn per company (including both bank and bond debt). By comparison, the average default was $1.4bn in size in 2018, $923mn in 2017, $928bn in 2016, $1.0bn in 2015, $2.6bn in 2014, and $639mn and $610mn in 2013 and 2012, respectively. Over the last ten years, the average default has been $1.0bn.

The largest default in 2019 was **Weatherford International**, an oilfield equipment and service provider, who filed Chapter 11 on July 1st, affecting $6.4bn in bonds and loans, good for the 14th largest high-yield default on record. For context, the five largest high-yield defaults on record are Energy Futures ($36.1bn, Apr-14), CIT Group ($26.0bn, Nov-09), Charter ($19.3bn, Jan-09), Caesar's Entertainment ($18.1bn, Dec-14, and Lyondell Chemical ($17.7bn, Jan-09). Note these exclude investment grade defaults such as Lehman Brothers ($65bn) and WorldCom ($27bn), which would both rank higher in terms of historical defaults. For context, the largest default in 2018 was iHeart Communications' $16.0bn bankruptcy, which ranks as the sixth largest high-yield default on record. The second largest default in 2019 was the telecommunications company, **Windstream**, which defaulted on $3.05bn in bonds and $1.75bn in loans, or a combined $4.8bn. Following these two companies and rounding out the five largest defaults of 2019 were **EP Energy/Everest Acquisition**, an oil and natural gas exploration and production company, which defaulted on $4.3bn in bonds, energy services company, **McDermott International**, which defaulted on $3.5bn in bonds and loans, and specialty chemical manufacturer **Hexion**, which filed Chapter 11 on $3.5bn in bonds. Interestingly, two of the five largest defaults in 2019 were from bond-only issuers, while the other three defaults were from bond-and-loan issuers.

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One notable default in 2019 that was not included in our tracking of high-yield defaults was Pacific Gas & Electric's $17.6bn chapter 11 filing in January. We classify that as an investment-grade default since it filed for bankruptcy only 19 days after getting downgraded to high yield status (by Moody's, the second of the ratings agencies to drop its rating below IG). As a result, the company never fully transitioned into the high-yield market and as such did not qualify as a high-yield bankruptcy. Similar investment grade defaults include Lehman Brothers ($65bn), WorldCom ($27.1bn), Enron ($9.9bn), and Washington Mutual ($7.2bn). Hypothetically, if we were to include PCG's default in our high-yield statistics, it would rank as the sixth largest default over the last 20 years, and including all IG defaults PCG ranks as the ninth largest default.

Table 1: Twenty largest defaults in 2019

Date	Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Industry
1-Jul	Weatherford International	6,164.1	285.0	6,449.1	Energy
28-Feb	Windstream	3,047.8	1,748.9	4,796.8	Telecommunications
15-Aug	EP Energy	4,279.9	0.0	4,279.9	Energy
1-Nov	McDermott International	1,300.0	2,231.8	3,531.8	Energy
1-Apr	Hexion	3,486.4	0.0	3,486.4	Chemicals
1-Oct	Acosta	800.0	1,967.4	2,767.4	Diversified Media
29-Oct	Murray Energy	814.1	1,726.6	2,540.7	Metals and Mining
15-Jul	Sanchez Energy	2,250.0	0.0	2,250.0	Energy
1-May	Sable Permian Resources	2,103.9	0.0	2,103.9	Energy
1-Apr	Monitronics International	585.0	1,072.5	1,657.5	Services
19-Feb	Affinion Group	681.5	837.4	1,519.0	Services
1-Apr	SunGard Availability Services	425.0	800.7	1,225.7	Technology
1-Oct	Foresight Energy	425.0	743.3	1,168.3	Metals and Mining
15-Mar	Jones Energy	1,009.2	0.0	1,009.2	Energy
19-Jul	Blackhawk Mining	0.0	916.3	916.3	Metals and Mining
3-Oct	Deluxe Ent. Services Group	0.0	772.8	772.8	Diversified Media
15-Apr	Bristow Group	751.5	0.0	751.5	Energy
12-Nov	Dean Foods	700.0	0.0	700.0	Food and Beverages
18-Jun	Legacy Reserves LP	342.8	339.8	682.6	Energy
17-Dec	4L Technologies	0.0	644.1	644.1	Services
	Total	**29,166.2**	**14,086.5**	**43,252.7**	
	Percent of total defaults	**90%**	**73%**	**84%**	

Source: J.P. Morgan.

The Energy sector accounted for a market-leading 21 defaults/distressed transactions in 2019 (40% of the 53 default actions). And its $26.1bn of default volume accounted for 44% of total volume, also the highest percentage of any industry. For context, the Energy sector's combined bond and loan default rate ended the year at 11.8%, up from 3.14% in 2017 and 2.68% in 2018, but still below the 14.2% rate in 2016. Meanwhile, the Metals/Mining sector accounted for four of the year's defaults totaling $4.97bn (8.4%). And combined Energy and Metals/Mining accounted for essentially half of the year's defaults/distressed activity. **Specifically, Energy and Metals account for 25 of 53 defaults (47%) and $31.1bn of $59.3bn in volume (52%), while there have been 28 ex-commodity defaults in 2019, totaling $28.2bn in bonds and loans.** Other sectors contributing high volume to 2019 default totals were Retail with $5.6bn (9.4% of total volume), Telecom with $5.4bn (9.1%), Services with $4.5bn (7.7%), and Diversified Media with $4.0bn (6.8%).

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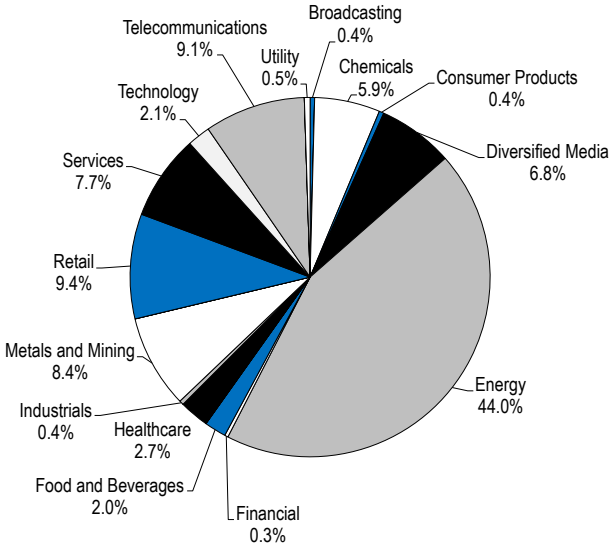
Table 2: 2019 default activity by industry

Industry (inc Dist. Exch.)	Amt affected ($mn)		No. of actions		LTM combined HY and Loan default rate
Automotive	0.0	0.0%	0	0.0%	0.00%
Broadcasting	240.0	0.4%	1	1.9%	0.46%
Cable and Satellite	0.0	0.0%	0	0.0%	0.00%
Chemicals	3,486.4	5.9%	1	1.9%	4.94%
Consumer Products	250.0	0.4%	1	1.9%	0.41%
Diversified Media	4,030.2	6.8%	3	5.7%	6.73%
Energy	**26,098.6**	**44.0%**	**21**	**39.6%**	**11.78%**
Financial	183.0	0.3%	1	1.9%	0.12%
Food and Beverages	1,162.6	2.0%	2	3.8%	1.30%
Gaming Lodging and Leisure	0.0	0.0%	0	0.0%	0.00%
Healthcare	1,575.5	2.7%	5	9.4%	0.53%
Housing	0.0	0.0%	0	0.0%	0.00%
Industrials	231.9	0.4%	1	1.9%	0.19%
Metals and Mining	**4,972.0**	**8.4%**	**4**	**7.5%**	**8.64%**
Paper and Packaging	0.0	0.0%	0	0.0%	0.00%
Retail	5,585.1	9.4%	5	9.4%	6.53%
Services	4,543.0	7.7%	4	7.5%	2.11%
Technology	1,225.7	2.1%	1	1.9%	0.51%
Telecommunications	**5,372.6**	**9.1%**	**2**	**3.8%**	**4.05%**
Transportation	0.0	0.0%	0	0.0%	0.00%
Utility	303.4	0.5%	1	1.9%	0.47%
Total	**59,260.0**		**53**		**2.47%**

Note: Includes distressed exchanges.
Source: J.P. Morgan.

Figure 7: 2019 default volume by industry as a percentage of total volume affected



Note: Includes distressed exchanges.
Source: J.P. Morgan.

The leveraged loan recovery rate for first-lien loans over the last twelve months was a record-low 47.7% (-2.8% m/m, -15.7% YTD, and -9.7% since YE17), compared with 63.4% in FY18, 57.5% in FY17, 62.7% in FY16, 48.2% in FY15, and their 22-year annual average of 65.5%. As for second lien loans, recoveries are 15.1% on an LTM basis (-3.4% m/m, +7.3% YTD, and +10.7% since YE17), compared with 7.8% in FY18, 4.4% in FY17, 14.8% in FY16, 34.3% in FY15, and their 12-year annual average of 22.4%. Overall loan recoveries, inclusive of first- and

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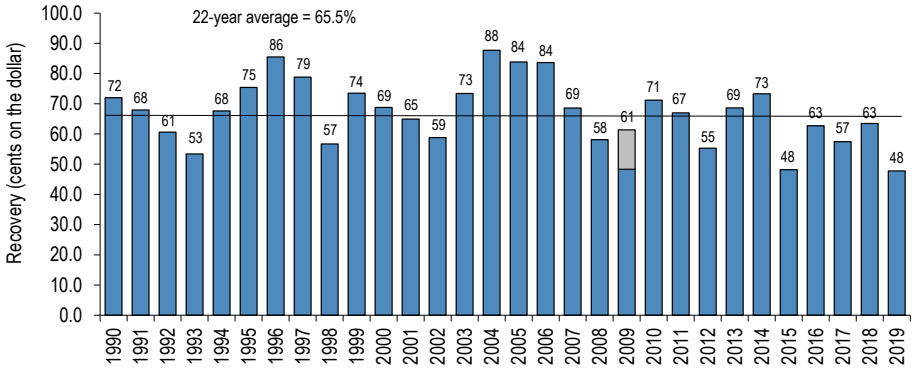
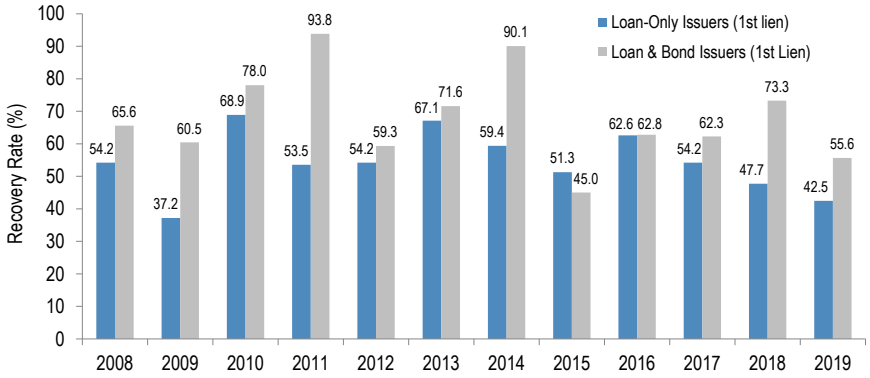
second-lien loans, are currently 45.9%, compared with 58.7% during FY18, 55.3% during FY17, and the long-term average of 55.0%. I**nterestingly, first-lien loan-only issuers recovered less (43%) than loan-and-bond issuers (56%) in 2019.** Note recoveries in 2017/2018 for loan-only issuers (48%/54%) were also below loan & bond issuer recoveries (73%/62%). Since 2008, the average recovery on 164 loan-only defaults is 52% vs 64% for 112 loan and bond defaults. Carrying market-wide implications, three out of four issuers is now loan-only vs only one out of four ahead of the last default cycle.

Figure 8: Loan recoveries decreased to their lowest level on record in 2019



Sources: Moody's Investors Service; J.P. Morgan.

Figure 9: Loan-only issuers recovered less than bond & loan issuers again in 2019



Sources: J.P. Morgan; S&P LCD; Markit.

Meanwhile, recovery rates for high-yield bonds over the last twelve months were 26.2%, down 2.3% month over month, -13.6% since year-end 2018, -26.4% since year-end 2017, and -14.3% below the 25-year annual average of 40.7%. For context, high-yield bonds recovered 39.8% in FY18, 52.6% in FY17, 31.1% in FY16, 25.2% in FY15, and 48.1% in FY14. More specifically, senior secured bonds recovered 46.4% over the last twelve months, compared with 46.3% in 2018, 61.6 in 2017, and their long term average recovery of 53%. And senior unsecured bonds recovered 18% over the LTM period, compared with 33% in 2018, 39% in 2017, and their long-term average of 37%.

There were 19 international defaults in 2019, totaling US-equivalent $11.1bn in bonds (no international loan defaults). By comparison, international defaults totaled 20 companies and $13.6bn in 2018, 17 companies and $18.7bn in 2017, 33

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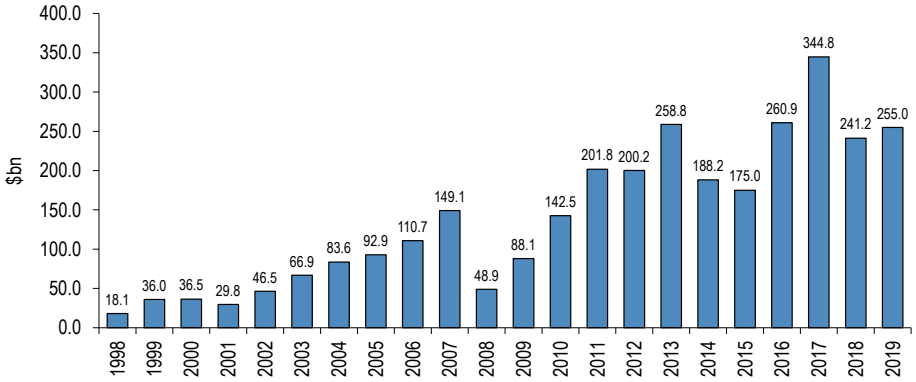
companies and $36.3bn in 2016, 24 companies and $10.4bn in 2015, 17 companies and $13.8bn in 2014, 11 companies and $10.5bn in 2013, 8 companies and $10.1bn in 2012, and 4 companies and $2.7bn in 2011. International defaults accounted for 15.8% of global defaults (inclusive of distressed exchanges), compared with 24.0% in 2018, 33.7% in 2017, 34.6% in 2016, 16.4% in 2015, 15.9% in 2014, 35.4% in 2013, 27.5% in 2012, and 11.0% in 2011. **Breaking international defaults down by region, ten of the 18 defaulted companies were from European countries and totaled $7.3bn of affected debt (65% of total Non-US default volume).** Further, six of the 18 defaults were from Asia totaling $2.4bn of debt affected (22%), two were from the Middle East/Africa region totaling $1.4bn (12%), and one was from Latin America ($103mn, 1%). Looking at international defaults by industry, the industry most affected by international defaults was Gaming, as two companies from the sector totaling $1.8bn of bonds defaulted (17% of the total debt affected). The Retail, Transportation, and Services sectors were next in terms of volume affected by international defaults, as default volume totaled $1.6bn (14%), $1.4bn (13%), and $1.3bn (11%) defaulted in the respective industries.

Pay downs and repayment rates

Institutional loan pay downs, which include amortizations and unscheduled pre-payments, increased in 2019, coming in as the fourth largest annual total on record. **In all, $255bn was paid down in 2019,** which followed pay downs totaling $241bn in 2018, a record-high $345bn in 2017, $261bn in 2016, $175bn in 2015, $188bn in 2014, $259bn in 2013, $200bn in 2012, and $202bn in 2011. **With the US institutional loan market size of roughly $1.2trn, this translated into a repayment rate of 22%, the lowest rate since it was 21% in 2015 and compared with the 20-year average of 33%.** For context, the repayment rate was 24% in 2018, 38% in FY17, and 31% in FY16. Pay downs were markedly heavier over the year's second half, with 67% of the total pay down volume occurring in 2H ($170bn) and the other third occurring in 1H ($85bn). By quarter, loan pay downs totaled $38bn in 1Q (15% of the total) compared with $48bn in 2Q (19%), $89bn in 3Q (35%), and $81bn in 4Q (32%).

Figure 10: Annual volume of institutional loan pay downs



Source: S&P LCD.

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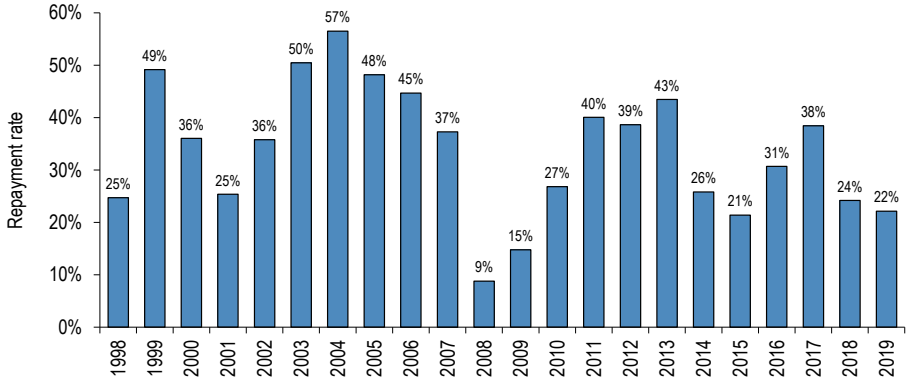
Figure 11: Annual institutional loan repayment rate

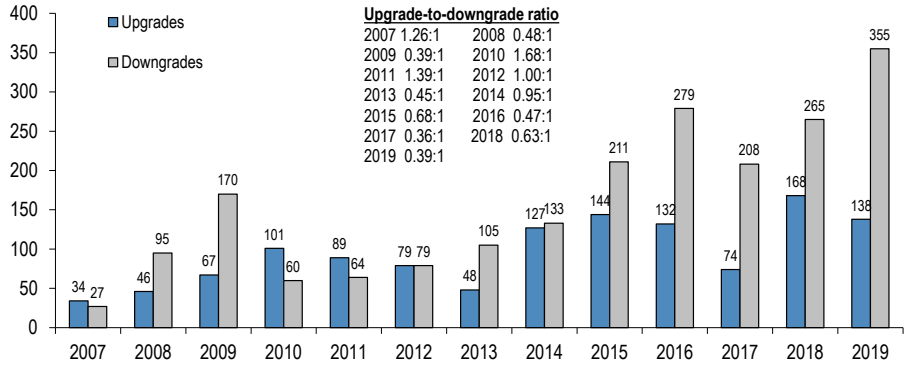


Sources: S&P LCD; J.P. Morgan.

Upgrades and downgrades

Institutional loan ratings changes were led by downgrades once again in 2019, with the number and volume of downgrades increasing y/y and the number and volume of upgrades decreasing y/y. Specifically, 138 loan borrowers totaling $130bn were upgraded in 2019, representing -18% and -11% decreases y/y, compared with 2018's 168 upgrades and $147bn affected. Meanwhile, 355 borrowers (+34% from 265 in 2018) totaling $305bn (+41% from $216bn in 2018) were downgraded in 2019. This translated to an upgrade-to-downgrade ratio by borrower of 0.39:1 and by dollar volume of 0.43:1, down from 2018's ratios of 0.63:1 and 0.68:1. The Technology (18 borrowers totaling $19.5bn) and Services (16 borrowers totaling $14.0bn) sectors led the way in terms of upgrades, while Healthcare and Technology led volume affected by downgrades with $51.0bn and $36.5bn affected, respectively , and Healthcare and Services led downgrades in terms of number of borrowers with 47 and 44, respectively. Only four industries had an upgrade-to-downgrade ratio by volume that was greater than 1, including Financial (2.97:1), Housing (1.25:1), Utility (1.19:1), and Food/Beverages (1.15:1), with only the Financial and Housing sectors having a better than 1:1 ratio by issuer.

Figure 12: Annual upgrades and downgrades by borrower



Sources: J.P. Morgan; Bloomberg.

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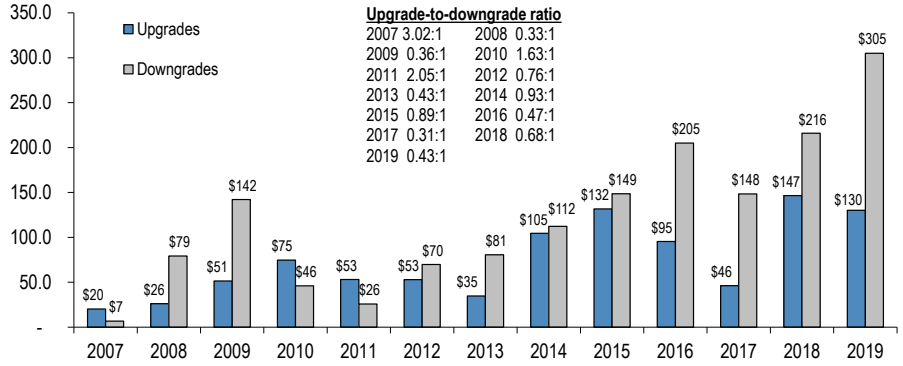
Figure 13: Annual upgrades and downgrades by institutional loan volume affected



Sources: J.P. Morgan; Bloomberg.

Table 3: Loan upgrades and downgrades by industry

	Issuers	Amount	Issuers	Amount	Issuers	Amount
Automotive	4	3,142.9	12	6,373.7	0.33	0.49
Broadcasting	3	2,233.5	6	5,229.4	0.50	0.43
Cable And Satellite	2	2,009.8	3	8,677.5	0.67	0.23
Chemicals	6	4,847.2	12	6,752.7	0.50	0.72
Consumer Products	4	1,245.5	23	15,696.9	0.17	0.08
Diversified Media	3	3,368.9	18	18,104.9	0.17	0.19
Energy	5	1,902.9	21	15,185.9	0.24	0.13
Financial	12	9,222.3	5	3,101.1	2.40	2.97
Food And Beverages	6	12,809.5	19	11,183.4	0.32	1.15
Gaming Lodging And Leisure	9	8,076.7	19	16,744.5	0.47	0.48
Healthcare	11	13,841.3	47	51,047.8	0.23	0.27
Housing	6	3,102.5	3	2,485.8	2.00	1.25
Industrials	12	7,384.2	22	22,128.6	0.55	0.33
Metals And Mining	1	852.1	5	4,789.8	0.20	0.18
Paper And Packaging	0	-	9	8,096.1	0.00	0.00
Retail	10	12,036.1	24	22,184.7	0.42	0.54
Services	16	14,023.6	44	27,513.3	0.36	0.51
Technology	18	19,546.0	34	36,475.2	0.53	0.54
Telecommunications	1	2,370.0	9	12,821.9	0.11	0.18
Transportation	3	1,546.7	7	4,870.1	0.43	0.32
Utility	6	6,584.1	13	5,537.5	0.46	1.19
Total	**138**	**130,145.8**	**355**	**305,000.9**	**0.39**	**0.43**

Sources: J.P. Morgan; Bloomberg.

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The Case for Leveraged Loans

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The Case for Leveraged Loans

Leveraged loan performance in 2019 benefited from a strong backdrop for risk assets. That said, loan performance lagged due to falling rates and rising rating/sector dispersion. In particular, 3-month LIBOR was down 90bp which has had a negative impact on coupons and the pricing environment. And amid these conditions, the retail loan mutual fund base experienced outflows in 58 of 59 weeks and saw its AUM contract by 40%. Meanwhile, the weaker growth backdrop produced poor performance for Split B/CCC loans (-3.0% YTD) and commodity-linked sectors such as Metals/Mining (-8.2%) and Energy (-4.5%). In addition, the distressed universe of loans (sub-$80) recently experienced its largest increase since August 2011 ($21bn in October to $81bn in November).

Is the underperformance of the loan asset class a harbinger of more difficult times to come for credit investors in 2020? We do not believe so. The worst of the damage to the US economy stemming from the China trade war is presumably behind and our economists are not forecasting a recession in 2020. This should alleviate some of the concerns surrounding underperformance of lower quality credits and the recent rise in distressed volumes. Importantly, we are not projecting a pickup in default activity in 2020. Meanwhile our economists only expect one more Fed rate cut over the next few years. If realized alongside any pickup in the global economy, these conditions would alleviate downward pressure on loan coupons and could possibly reinvigorate demand for low duration products. As such, the forecasted 20% year-over-year drop in CLO issuance by our strategists (from ~$120bn to $95bn) is expected to be offset by less severe retail outflows (vs $38bn in 2019) and a balanced technical (i.e. capital market restraint akin to 2019).

Our full-year 2020 return forecast for loans is 5.0%, which was recently lowered by 150bp following a 220bp rally between when we established our forecast in late November and early January. Notably, this is only 100bp below our forecast for HY bonds after underperforming by an average of 260bp per annum between 2010 and 2019. Our year-end 2020 forecasts for loan yields and spreads (to a 3yr takeout) are 6.25% and 450bp. We also continue to advocate investors allocate towards B1 and B2 rated loans over Double B bonds where the yield pickup is now 140bp and 225bp, or comfortably above an average yield differential of 75bp and 190bp since 2010. Note since late November the yield gap between B1 and B2 rated loans over Double B bonds has narrowed by 20bp and 40bp, respectively.

Factors supporting demand for leveraged loans

Forming the case for leveraged loans, we summarize our expectations for factors impacting demand, as well as a few key features that should draw significant attention to the asset class in the years ahead, namely a low correlation to Treasuries and low return volatility. Demand has historically tracked return expectations, and our forecast for positive total returns in 2020 should be supportive. With record refinancing conditions throughout most of the credit cycle reinforcing a below average default backdrop for at least the next 18-24 months, a very strong relative case for the asset class is evident. Certainly the old rule models of cheap spreads relative to defaults are no longer completely applicable in this environment. However, with Fed officials guiding for no more rate cuts over the next year and rate expectations having already reset lower, attention on rate risks could resurface in 2020. Volatile Treasury yields, along with stable balance sheets, low defaults, and attractive relative value continue to be factors supportive of loan demand.

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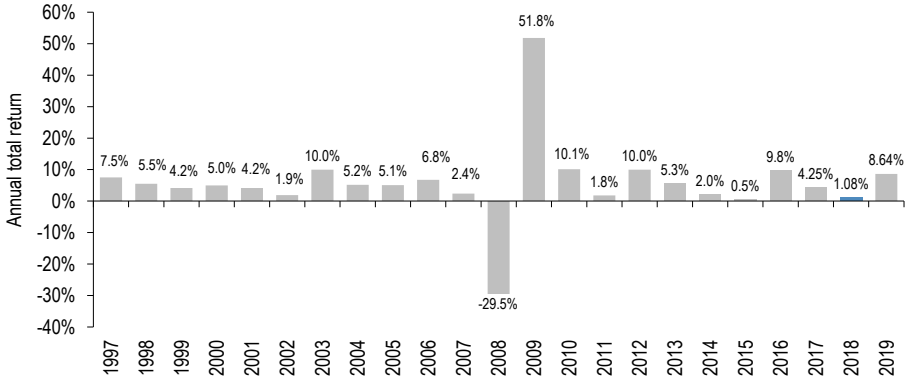
Figure 1: Annual returns for leveraged loans



Sources: JPMorgan; S&P/LCD.

Slower growth and one rate cut forecasted for 2020

A nimble pivot by the Fed to provide easier financial conditions supported an above-trend 2.1% growth outcome so far in 2019. Looking forward, our economists believe 4Q GDP growth will be a local trough, and—like the market—they are sanguine about the economy's chances of avoiding a recession next year. That said, they remain somewhat unconvinced that growth will accelerate in 2020. The fading of 2019's significant federal fiscal support should moderate growth to a trend-like 1.7% pace in 2020. Essentially our forecast is for GDP growth in the US to continue on about the same path that it has for the past couple of years—neither too fast that it induces policy tightening nor too slow that it raises higher concerns about inflation. Meanwhile, ongoing trade policy uncertainty coupled with what should be a contentious electoral season, should dampen any rebound in capital spending. But while the business caution evident this year may linger into next year, the consumer remains well-positioned to keep spending. While we do not see any new expansionary fiscal initiatives next year, the path to cutting rates was made easier by the benign inflation backdrop. The limitations on the Fed's toolkit place a premium on acting preemptively. Without more monetary stimulus our economists think the Fed's inflation credibility could be tested, and they pencil in one more ease in 2Q20. Additionally, our rates forecast includes modest curve steepening as the more upbeat macro outlook outlined above unfolds. In particular, 2, 5, and 10yr US Treasury yields are forecasted to end 2Q20 at 1.50%, 1.55% and 1.85% and 4Q20 at 1.60%, 1.75% and 2.05%.

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Table 1: 2020 Treasury yield and Economic forecasts

J.P. Morgan interest rate forecast	Actual (02-Jan-20)	Feb-20	1Q20	2Q20	3Q20	4Q20
Effective funds target	1.55%	1.55%	1.55%	1.30%	1.30%	1.30%
3-mo LIBOR	1.90%	1.80%	1.75%	1.50%	1.50%	1.65%
2-yr US Treasury	1.57%	1.55%	1.45%	1.50%	1.55%	1.60%
5-yr US Treasury	1.67%	1.60%	1.45%	1.55%	1.65%	1.75%
10-yr US Treasury	1.88%	1.80%	1.70%	1.85%	1.95%	2.05%

J.P. Morgan crude oil price forecast ($/bbl)	Actual (02-Jan-20)	1Q20	2Q20	3Q20	4Q20
Brent	66.25	64.00	58.00	59.00	55.60
WTI	61.18	59.00	53.00	55.00	52.00

GDP	3Q19	4Q19	1Q20	2Q20	3Q20	2019	2020
United States	2.1	2.0	1.3	1.5	1.5	2.3	1.7
Japan	1.8	-2.2	0.5	1.0	1.1	1.1	0.4
China	5.5	5.8	6.1	6.0	5.7	6.1	5.9
Euro area	0.9	1.0	1.3	1.5	1.5	1.2	1.2
EM	3.9	3.8	4.4	4.4	4.2	4.0	4.2

Source: J.P. Morgan.

Minimal correlation to interest rates

A factor likely to play a role in asset allocations in 2019 and working in favor of leveraged loans is the potential for rising interest rates. Due to their floating rate feature, leveraged loans limit interest-rate risk and also exhibit a low correlation to most asset classes. Never more was this key characteristic more apparent than during May and June 2013's stretch of volatility across bonds, and lack thereof for loans. For example, despite a 100bp+ rise in Treasury yields in 2013, leveraged loans managed to provide a +5.3% return, sharply outperforming fixed income peers such as investment-grade (-0.8%), emerging market bonds (-6.6%), and 10-year Treasuries (-7.7%). And with implications for high-yield credit, 5-year Treasury yields are forecasted to end the year at 1.75%, or 10bp above current levels. Therefore demand for loans, which carry a 6% Current Yield that floats and sits senior in the capital structure, should benefit from the dearth of alternatives available to protect a portfolio against rising rates. For example, looking back over the last fifteen years ending December 31st, 2019, the correlation between leveraged loans and 5- and 10-year Treasuries was -0.44 and -0.42, respectively. This is the lowest among all asset classes. Meanwhile, the correlation of leveraged loan returns with high-grade bonds (0.27) and the S&P 500 (0.59) is also low.

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Table 2: The correlation between leveraged loans and other assets is minimal

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPM JULI High-Grade Index	JPM US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM Emerging Market Bond Index-Global Composite	Dow Jones World Emerging Market Stock Index	Gold	US Inflation
10-year Treasury	0.92												
JPMorgan MBS Bond Index	0.82	0.82											
LB Aggregate Bond Index	0.78	0.85	0.85										
JPM JULI High-Grade Index	0.49	0.56	0.61	0.84									
JPMorgan US HY Index	**-0.25**	**-0.24**	**0.00**	**0.19**	**0.52**								
S&P 500	-0.33	-0.32	-0.13	-0.01	0.26	**0.72**							
Wilshire 5000	-0.34	-0.33	-0.13	0.00	0.26	**0.72**	0.99						
Russell 2000	-0.37	-0.37	-0.20	-0.09	0.18	**0.68**	0.90	0.93					
JPM EMBI- Global Composite	0.18	0.24	0.43	0.58	0.73	**0.73**	0.54	0.54	0.45				
DJ World EM Stock Index	-0.22	-0.23	-0.02	0.11	0.39	**0.74**	0.77	0.77	0.69	0.70			
Gold	0.33	0.29	0.37	0.36	0.33	**0.17**	0.04	0.05	0.02	0.39	0.31		
US Inflation	-0.29	-0.34	-0.28	-0.27	-0.24	**0.19**	0.10	0.10	0.09	0.01	0.13	0.03	
Leveraged loans	**-0.44**	**-0.42**	**-0.17**	**-0.03**	**0.27**	**0.88**	**0.59**	**0.59**	**0.55**	**0.51**	**0.59**	**0.02**	**0.34**

Note: Fifteen years ended December 31st, 2019.
Sources: JPMorgan; S&P/LCD.

Below average default risk

Default activity in 2019 has been above expectations due to stress in the energy sector, and we believe less activity in the energy sector in 2020 (particularly bonds) will be offset by the inclusion of one (or more) large distressed situations (particularly bonds). Therefore we are expecting comparable year-over-year default activity in 2020. There has been a total of $58.1bn of defaults ($50.3bn) or distressed exchanges ($7.8bn) in 2019 versus $39.1bn through YTD18. Sectors contributing by # include Energy (40%), Healthcare (8%), and Metals/Mining (8%). The US HY bond and loan default rates are up to 2.94% and 2.18%, which ex-commodities fall to only 1.28% and 1.52%. For reference, the long-term average HY bond and loan default rates are 3.46% and 3.07%. Going forward, we see very little reason to expect much of a pickup in default activity for the foreseeable future. Only a modest erosion in credit fundamentals and the past few years' heavy pace of refinancing across bonds and loans has balance sheets in a solid position. Meanwhile, capital markets should remain highly accessible in 2020 with the drag from global trade receding, US economic growth expected to stabilize, and monetary policy to remain accommodative. And a multi-year high for distressed bonds and loans (i.e. sub $70 bonds, sub $80 loans) totaling $152bn is still well below where it stood in early 2016 ($345bn). For 2020 we expect high-yield bond and loan default rates to remain about unchanged at 3.0% and 2.0%, respectively, which is below the 3.0-3.5% long-term averages. Meanwhile, we introduce an early-on forecast for 2021's high-yield bond and loan default rates of 3.5% and 3.0%, respectively, a modest y/y increase for each as the cycle matures and more Energy defaults resurface (esp. drillers).

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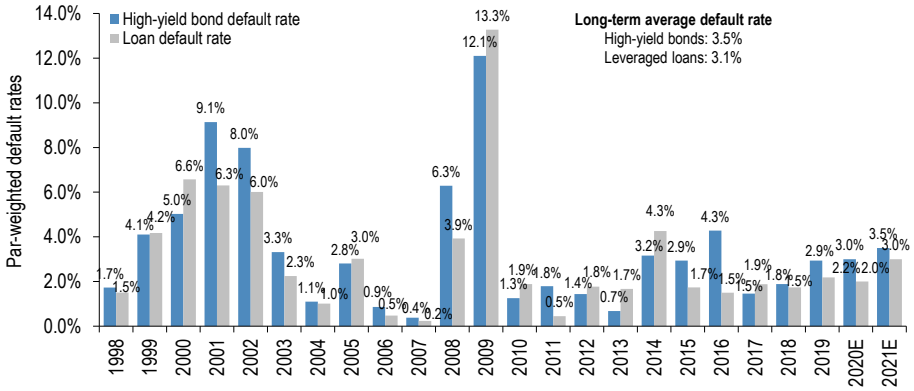
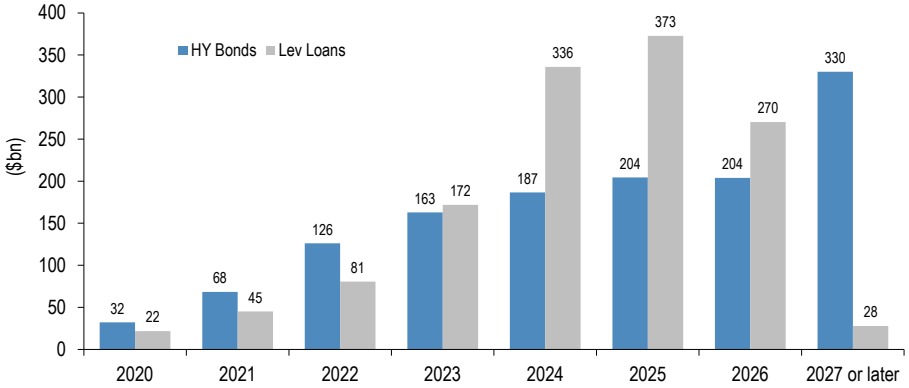
Figure 2: Default rates expected to remain modest in 2020 and 2021



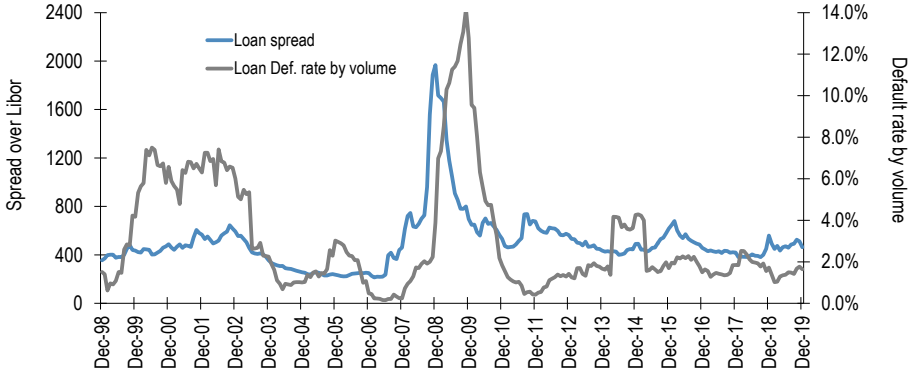
Source: J.P. Morgan.

Figure 3: High-yield bond and institutional loan maturities



Note: As of January 6th, 2020.
Sources: J.P Morgan; Markit.

Figure 4: Loan spreads versus the default rate



Sources: JPMorgan; Moody's.

Attractive risk/return profile

When making an asset allocation decision, recognizing volatility in the context of returns is an important step toward managing risk. For leveraged loans, this discussion becomes extremely complicated by 1) the sizeable market growth experienced pre-credit crisis 2) the crucial role investor leverage played in obtaining

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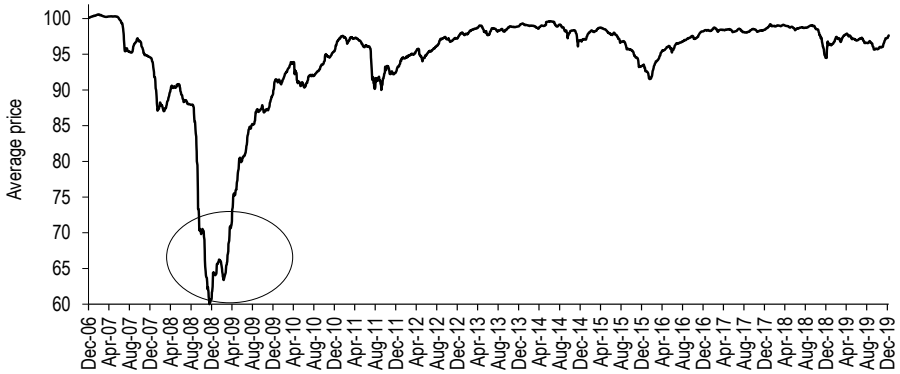
that growth and 3) the altered landscape in the aftermath of reduced TRS lines and the absence of new CLO origination. Because of extreme price swings experienced during the financial crisis, a look at returns and volatility extending beyond the past several years creates an unfavorable comparison. For example, loan prices dipped to levels in the fall of 2008 likely to never be seen again, which were below historical recovery rates, driven by forced selling via banks offloading bridge loans, an unwind of TRS lines, sales by CLOs attempting to maintain compliance with tests, and sales by mutual funds and hedge funds in order to meet mounting redemptions. Pre-credit crisis, leveraged loan prices rarely deviated from par, and return volatility at the time was only a fraction of that experienced by most other asset classes.

Figure 5: Average dollar price J.P Morgan Leveraged Loan Index



Source: J.P. Morgan.

Today is not 2008. The lack of bridge risk, limited investor leverage, the composition of new-issuance since early 2009, and a focus by corporations on de-leveraging versus re-leveraging has the market much healthier today compared to 2008. One reason loan prices dropped to $60 was the challenging technical backdrop. At the time, we estimate bridge risk peaked at $350bn and CLO warehouse exposure was $40-50bn. Today, we estimate bridge risk to be less than $50bn and CLO warehouse exposure to be $15bn. Just as important, there is considerably less investor leverage today. By itself, less investor leverage should insulate the market well from the kind of forced selling seen in late 2008.

Table 3: Credit market conditions remain better positioned compared to 2008

Bridge risk is lower		CLO warehouses are negligible	
Bridge risk	**Total loans & bonds**	**CLO warehouses**	**Total**
2007	$330bn	2007	$40-50bn
Today	~$50bn	Today	$15bn
Less investor leverage in the loan market			
Total return swap lines	**Total**		**Leverage**
2007	$250bn		8-10x
Today	~<$75bn		~3-4x

Source: J.P. Morgan.

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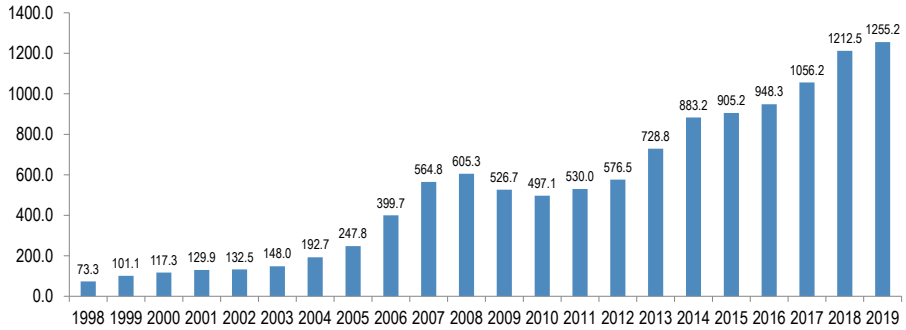
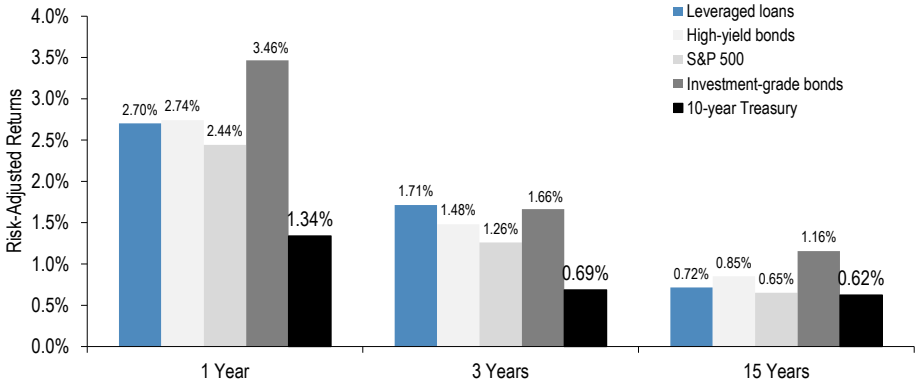
Figure 6: The institutional loan market grew rapidly between 2004 and 2007 and again between 2012 and 2019



Source: J.P. Morgan; S&P/LCD.

Importantly, while return volatility for the leveraged loan asset class is unlikely to return to the very low levels pre-credit crisis (1.5% annualized five-years ending June 2007), encouragingly, we do believe it should be similar to the low volatility experienced over the past several years. As of December 31, 2019, the standard deviation of monthly returns for leveraged loans over the last year was at 3.2%, compared to 3.1% in 2018, 0.8% in 2017, 3.3% in 2016, 2.4% in 2015, 1.7% in 2014 and 2013, 2.3% in 2012, 6.0% in 2011, 4.6% in 2010, and a peak of 24.5% in August 2009. And on a risk adjusted basis, the return per unit of risk over the past 12 months has been 2.70% (return of 8.64% divided by volatility of 3.20%), which is in-line with HY bonds (+2.74%), above stocks (+2.44%) and the 10-year Treasury (+1.34%), and below higher duration products such as investment-grade bonds (+3.46%). If one extends their horizon to three years, a comparison of risk adjusted returns appears very attractive versus other credit products. For loans the risk adjusted return is 1.71%, versus 1.48% for high-yield bonds, 0.69% for the 10-year Treasury, and 1.66% for investment-grade bonds. This is mostly because loans remained relatively firm during the Energy crunch in early 2016. Going forward, with Treasury rates low and rate volatility expected to increase alongside an economic recovery, we believe the risk/return profile for floating rate loans will remain high for 2019, making loans among the most appealing investments available today, especially for those looking to shield a portfolio against the possibility of rising interest rates.

Figure 7: Risk-adjusted returns on various assets



Source: J.P. Morgan.

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Table 4: Risk adjusted returns

	Average annual returns						Average annual volatility						Modified Sharpe Ratio [1]					
	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year
Fixed Income																		
5-year Treasury	5.78%	2.55%	1.96%	2.93%	3.60%	4.95%	3.31%	2.79%	3.15%	3.26%	3.83%	4.20%	1.75	0.91	0.62	0.90	0.94	1.18
10-year Treasury	9.19%	3.68%	2.37%	4.26%	4.33%	5.55%	6.87%	5.36%	5.94%	6.32%	6.95%	7.11%	1.34	0.69	0.40	0.67	0.62	0.78
JPMorgan MBS Index	6.46%	3.27%	2.64%	3.23%	4.06%	na	1.84%	2.20%	2.16%	2.21%	2.57%	na	3.50	1.48	1.22	1.46	1.58	na
LB Aggregate Bond Index	8.72%	4.03%	3.05%	4.05%	4.35%	5.69%	3.43%	2.91%	3.06%	3.11%	3.31%	3.55%	2.54	1.38	1.00	1.30	1.31	1.60
JPM JULI HG Index	14.05%	5.87%	4.76%	5.82%	5.82%	6.88%	4.06%	3.53%	3.80%	3.91%	5.04%	4.96%	3.46	1.66	1.25	1.49	1.16	1.39
Leveraged loans	8.64%	4.61%	4.79%	5.32%	4.95%	5.34%	3.20%	2.69%	2.83%	3.27%	6.91%	5.48%	2.70	1.71	1.69	1.63	0.72	0.98
JPM US HY Index	**14.08%**	**6.21%**	**6.24%**	**7.80%**	**7.32%**	**7.87%**	**5.14%**	**4.19%**	**5.44%**	**5.65%**	**8.61%**	**7.79%**	**2.74**	**1.48**	**1.15**	**1.38**	**0.85**	**1.01**
Equity																		
S&P 500	31.48%	15.26%	11.66%	13.54%	8.99%	10.21%	12.89%	12.10%	11.99%	12.46%	13.81%	14.55%	2.44	1.26	0.97	1.09	0.65	0.70
Wilshire 5000	30.90%	14.52%	11.18%	13.55%	8.87%	9.97%	13.45%	12.39%	12.24%	12.89%	14.29%	14.93%	2.30	1.17	0.91	1.05	0.62	0.67
Russell 2000	23.79%	8.08%	7.90%	11.66%	7.86%	9.23%	17.90%	15.92%	16.03%	17.00%	18.53%	19.07%	1.33	0.51	0.49	0.69	0.42	0.48
International Equity																		
FTSE 100	12.16%	4.63%	6.18%	7.18%	5.70%	5.27%	10.03%	10.18%	10.40%	11.42%	13.00%	13.35%	1.21	0.45	0.59	0.63	0.44	0.39
CAC 40	30.45%	10.60%	10.52%	7.94%	6.45%	6.81%	11.62%	12.34%	14.00%	14.86%	16.06%	17.96%	2.62	0.86	0.75	0.53	0.40	0.38
DAX	25.48%	5.23%	6.41%	9.21%	8.31%	7.90%	12.77%	12.62%	15.89%	16.30%	17.51%	20.75%	2.00	0.41	0.40	0.56	0.47	0.38
Emerging Markets																		
JPMorgan EMBIG	14.42%	6.06%	5.88%	6.57%	7.05%	9.97%	4.85%	4.85%	5.48%	6.44%	7.86%	11.34%	2.97	1.25	1.07	1.02	0.90	0.88
DJ World EM Stock Index	16.65%	11.04%	5.69%	3.54%	6.28%	3.51%	14.53%	13.55%	15.21%	17.03%	20.94%	23.01%	1.15	0.82	0.37	0.21	0.30	0.15
Other																		
Gold	18.87%	9.76%	5.16%	3.34%	8.71%	5.74%	12.96%	10.19%	13.37%	15.95%	17.61%	15.97%	1.46	0.96	0.39	0.21	0.49	0.36
US inflation	2.22%	2.18%	1.85%	1.76%	2.02%	2.20%	0.51%	0.60%	0.69%	0.69%	1.09%	0.93%	4.32	3.64	2.68	2.56	1.86	2.38
JPM High-Yield Indices																		
US dollar HY Global	14.59%	6.60%	6.53%	7.79%	7.38%	na	4.70%	3.91%	5.27%	5.73%	8.71%	na	3.11	1.69	1.24	1.36	0.85	na
US dollar HY Dev. Markets	14.60%	6.45%	6.36%	7.88%	7.40%	na	4.96%	4.12%	5.32%	5.63%	8.63%	na	2.94	1.56	1.20	1.40	0.86	na
US dollar Euro. HY Index	18.68%	7.73%	7.94%	8.44%	8.22%	na	3.71%	3.85%	4.40%	6.19%	10.03%	na	5.03	2.01	1.81	1.36	0.82	na
Euro HY Index	11.03%	4.23%	4.74%	8.36%	7.24%	na	4.05%	3.56%	4.37%	6.17%	9.90%	na	2.72	1.19	1.09	1.36	0.73	na
Pound Sterling HY Index	13.88%	6.17%	6.74%	9.78%	8.69%	na	2.80%	3.31%	3.82%	5.39%	6.41%	na	4.95	1.86	1.77	1.81	1.36	na
Euro. Currency HY Index	11.38%	4.50%	5.07%	8.54%	7.54%	na	3.86%	3.47%	4.14%	6.04%	9.25%	na	2.95	1.30	1.23	1.41	0.82	na
Euro. Aggregate HY Index	13.07%	5.36%	5.97%	8.38%	7.62%	na	3.70%	3.40%	4.04%	5.93%	9.43%	na	3.54	1.58	1.48	1.41	0.81	na
HY100 Index	17.44%	7.65%	6.51%	7.89%	7.36%	na	5.46%	4.47%	5.70%	6.87%	10.45%	na	3.19	1.71	1.14	1.15	0.70	na
Institutional HY Index	15.24%	6.55%	5.97%	7.65%	6.88%	na	4.77%	3.87%	4.43%	4.87%	6.74%	na	3.19	1.69	1.35	1.57	1.02	na
JPM HY Index Sectors																		
US BB-rated	15.61%	6.57%	5.94%	7.47%	7.19%	na	4.73%	3.84%	4.57%	4.86%	6.57%	na	3.30	1.71	1.30	1.54	1.09	na
US B-rated	15.69%	6.76%	5.75%	7.59%	6.37%	na	5.18%	4.25%	5.26%	5.55%	8.03%	na	3.03	1.59	1.09	1.37	0.79	na
US CCC-rated	11.25%	5.71%	6.28%	8.34%	7.29%	na	7.46%	6.34%	9.38%	9.65%	14.78%	na	1.51	0.90	0.67	0.86	0.49	na
US defaulted securities	-13.83%	-11.55%	1.25%	2.48%	6.94%	na	10.08%	10.25%	15.77%	13.76%	23.91%	na	-1.37	-1.13	0.08	0.18	0.29	na
JPMorgan Loan Indices																		
Second Lien Loan Index	6.76%	7.04%	7.30%	9.21%	na	na	3.18%	2.80%	4.49%	4.37%	na	na	2.12	2.51	1.62	2.11	na	na
Liquid Loan Index	10.09%	4.37%	4.65%	5.15%	na	na	4.14%	3.39%	3.35%	3.76%	na	na	2.44	1.29	1.39	1.37	na	na
Euro Loan Index	4.77%	3.44%	4.18%	na	na	na	1.08%	1.28%	1.63%	na	na	na	4.42	2.70	2.56	na	na	na
JPM Lev. Loan Index Sectors																		
BB-rated Loans	9.50%	4.31%	4.55%	4.56%	4.21%	na	3.13%	2.73%	2.50%	2.71%	5.65%	na	3.04	1.58	1.82	1.69	0.74	na
B-rated Loans	8.78%	4.94%	4.93%	5.53%	4.99%	na	3.38%	2.70%	3.05%	3.79%	8.39%	na	2.59	1.83	1.62	1.46	0.59	na
CCC-rated Loans	1.45%	4.74%	3.69%	6.28%	5.06%	na	7.30%	6.18%	9.98%	9.20%	14.03%	na	0.20	0.77	0.37	0.68	0.36	na

Note: Returns are through December 31st, 2019.
Source: J.P. Morgan.

So what has the risk/return profile historically looked like? Pre-credit crisis, leveraged loans historically had provided investors with very low return volatility compared with other assets, which led to their superior risk/reward profile. For example, over the five years ended June 2007, leveraged loans had annualized return volatility of a mere 1.5%, compared with equities, investment-grade bonds, and high-yield bonds of 11.6%, 5.0%, and 4.9%, respectively. Combined with an annualized return of 6.1%, leveraged loans had a 4.1% annualized return per unit of risk over the five year period ended June 2007. For perspective, equities, investment-grade bonds, and high-yield bonds provided a far lower return per unit of risk over the comparable period of 0.9%, 1.1%, and 2.4%, respectively, even as their respective absolute returns compared quite favorably to loans (6.1% versus 10.7%, 5.6%, and 11.6%, respectively). Looking at 3 and 10-year risk/return ratios pre-credit crisis for

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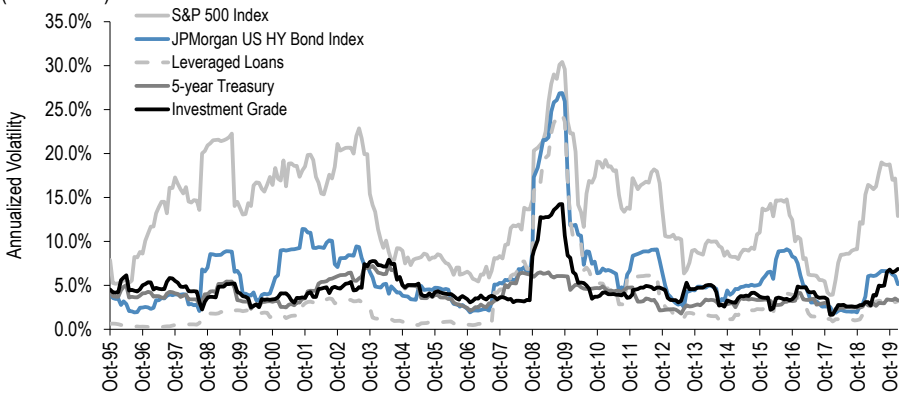
leveraged loans told a similar story. Each time period illustrated substantial disparities that worked strongly in favor of leveraged loans.

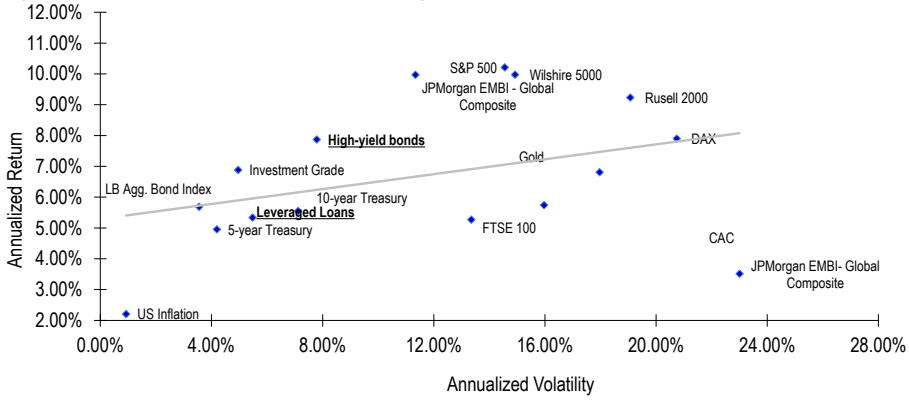
In hindsight, price volatility was arguably understated due to the lack of price transparency, and conversely, overstated between July 2007 and June 2009 due to forced selling. Over the two year period ended June 2009, leveraged loans annualized return volatility rose to 16.7%, versus 1.5% during the prior 5 year period. This led to a sharp deterioration in the risk/return profile for leveraged loans, from the 4.1% annualized return per unit of risk over the five year period ended June 2007, to -0.3% over the two year period ended June 2009. While 15-year risk adjusted returns for leveraged loans compare unfavorably to other assets as a result (0.74%), interestingly, annualized return volatility for loans over this period is actually lower than that of Treasuries.

Figure 8: 12-month rolling return volatility
(Annualized)



Source: J.P. Morgan.

Figure 9: Risk/Reward ratios over the last 15 years



Sources: J.P. Morgan; S&P/LCD.

Finally, including leveraged loans in one's investment portfolio is probably more pertinent now than ever before. As demonstrated in the following chart, increasing the weighting toward leveraged loans within a high-grade portfolio can decrease risk while sharply improving the risk-adjusted return. Given we expect interest rate risk to be more pertinent than credit risk over the coming years a high-grade portfolio would be well served to allocate toward loans where the current income is higher (5.5% loans versus 4.0% HG). For example, over the last fifteen years ended

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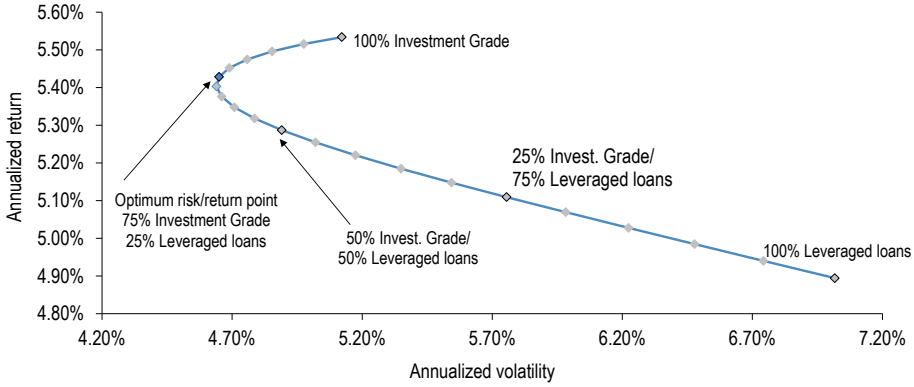
December 31st, 2019, a portfolio consisting of 75% high-grade bonds and 25% leveraged loans provided investors with an optimal 1.17% return per unit of risk. With default risk low for the foreseeable future, economic conditions improving, and with very little room for interest-rates to fall further, it should again prove beneficial in 2019 to add leveraged loans to an investment-grade portfolio for diversification purposes.

Figure 10: Leveraged loans versus High-grade bonds



Note: Leveraged loans versus high-grade bonds: fifteen years ended December 31st, 2019.
Sources: J.P. Morgan; S&P/LCD

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Fund flow review

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Fund flow review

Key observations from 2019 and future drivers of demand

- Leveraged loan funds experienced their largest outflows on record in 2019 amid three Fed rate cuts, falling Treasury yields, and rising rating/sector dispersion. After suffering three of the largest weekly outflows on record in December 2018 and the largest quarterly exodus on record in 4Q18 ($20.7bn), withdrawals remained steady throughout 2019 with weekly outflows occurring in 51 of 52 weeks. That said, only three weekly outflows in 2019 exceeded $1.0bn, whereas the $2.3bn outflow in the first week of 2019 was the largest single outflow by nearly double. Outflows throughout the year were fairly evenly distributed, though they were slightly tempered in the final few months of the year. Outflows for loans in 1Q19, 2Q19, 3Q19 and 4Q19 totaled -$11.1bn, -$9.9bn, -$9.4bn, and -$8.0bn, respectively. Outflows in FY19 totaled -$38.3bn, which compares to flows over the previous five years totaling -$4.7bn in FY18, +$13.1bn in FY17, +$9.2bn in FY16, -$21.7bn in FY15, and -$23.8bn in FY14. Recall, the loan asset class reported $63bn of inflows in 2013 as 10yr US Treasury yields soared.
- Retail AUM decreased 27% during 2019 and at $97.1bn is 37% below the $154.0bn peak in Oct-18. For context, this dataset was below $30bn of AUM back in mid-2010, and declined to only $10bn during the midst of the financial crisis. Retail leveraged loan funds now account for just above 8% of the estimated $1.2trn institutional loan market, down from 20% at the beginning of 2014 and now below the 12% heading into 2013. With interest rates already historically low, and a dearth of product available to protect investors against rising rates, it is unlikely the rapid contraction in the leveraged loan mutual fund base experienced over the past year will persist.
- The loan ETFs didn't play a large role in contributing to 2019's heavy outflows. The Loan ETFs experienced a mere $150mn of outflows in 2019, as compared to $2.4bn of outflows in 2018 and inflows of $3.8bn and $5.4bn in 2017 and 2016. Total Loan ETF AUM now stands at $10.0bn, or 10.3% of a $97bn universe of retail funds tracked by Lipper.
- In 2019, gross CLO volume of $160.8bn was more than 40% lower than the prior year's volume of $277.6bn and 2017's record-high volume of $282.2bn, but still ranked as the third largest annual total on record. For context, volumes were $73bn in 2016, $100bn in 2015 and $124bn in 2014. Beyond retail, other sources of demand not easily measured such as institutional accounts (pension and insurance companies), hedge funds, banks, private wealth management, and high-yield mutual funds also allocated substantial amounts of money to loans in 2018.
- Fund flows are primarily the product of expected risks (including default, economic, and interest rate risks) and expected returns (both outright and versus other investment options). We expect demand for loans to be strong going forward supported by a low correlation to Treasuries, low return volatility, strong fundamentals, and attractive relative value.

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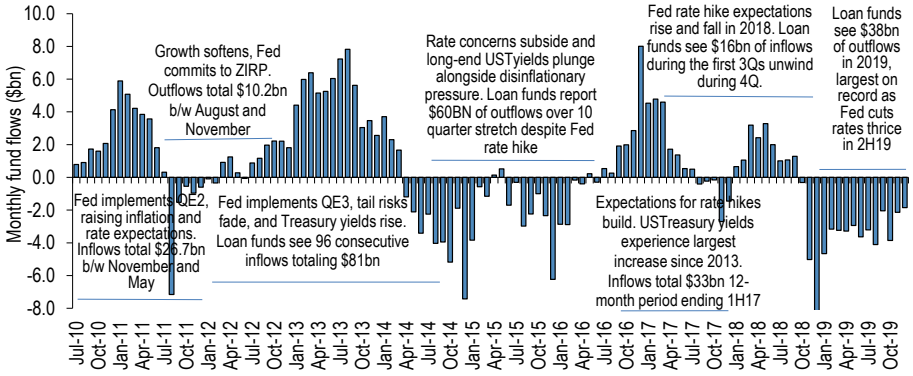
Figure 1: Loan Funds experience record outflows of $38bn in 2019 amid rate cuts and global volatility

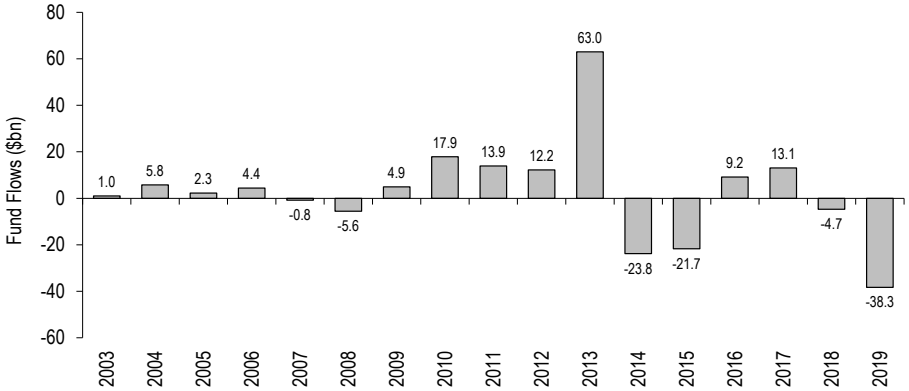


Source: Lipper FMI.

Leveraged loan fund flow review

After experiencing incredible growth in the retail base in 2013, a waning attention on rate risk led to persistent outflows for leveraged loan mutual funds between 1Q14 and 2Q16. However, resurfacing rate concerns in 2H16 fueled a stretch of inflows which resulted $45bn in inflows over the next 27 months. That said, after experiencing $16bn of inflows through 2018's first 3 quarters, the loan asset class endured $21bn of outflows in the fourth quarter of 2018. In particular, three of the largest weekly outflows on record for loan funds occurred in December 2018: -$3.5bn week ending 12/26, -$3.3bn week ending 12/19, and -$2.5bn week ending 12/12. And that run continued throughout 2019, as the year saw 51 weekly outflows in 52 weeks. In all, the total capital outflow from loan funds in 2019 amounted to $38.1bn. This was the largest annual outflow from loan funds on record. January and August suffered the heaviest total monthly outflows, as $4.7bn exited funds in January 2019 and $4.1bn in August. The only weekly inflow of the year occurred in the week of 16th September. Loans previously reported inflows of +$13.1bn and +$9.2bn in 2017 and 2016 and outflows in 2015 and 2014 of $21.7bn and $23.8bn, respectively. Recall, the loan asset class reported $63bn of inflows in 2013 as 10yr US Treasury yields soared. Loans underperformed high yield and high grade bonds in 2019, but still posted gains of +8.64%.

Figure 2: Loan funds faced the heaviest outflows on record in 2019



Source: Lipper FMI.

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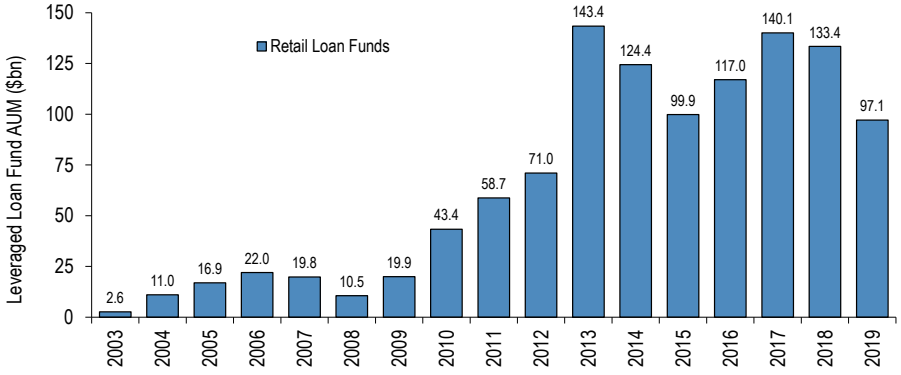
Retail AUM decreased 27% during 2019 and at $97.1bn is 37% below the $154.0bn peak in Oct-18. For context, this dataset was below $30bn of AUM back in mid-2010, and declined to only $10bn during the midst of the financial crisis. Retail leveraged loan funds now account for just above 8% of the estimated $1.2trn institutional loan market, down from 20% at the beginning of 2014 and well below the 12% heading into 2013. This attribution is below that of dedicated retail high-yield mutual funds, which at $302.2bn of AUM as tracked by Lipper, accounts for approximately 23% of the estimated $1.3trn US high-yield bond universe. An equal attribution for retail loan funds would encompass another $168bn of growth (versus $63bn of inflows in 2013) absent any expansion in amount outstanding.

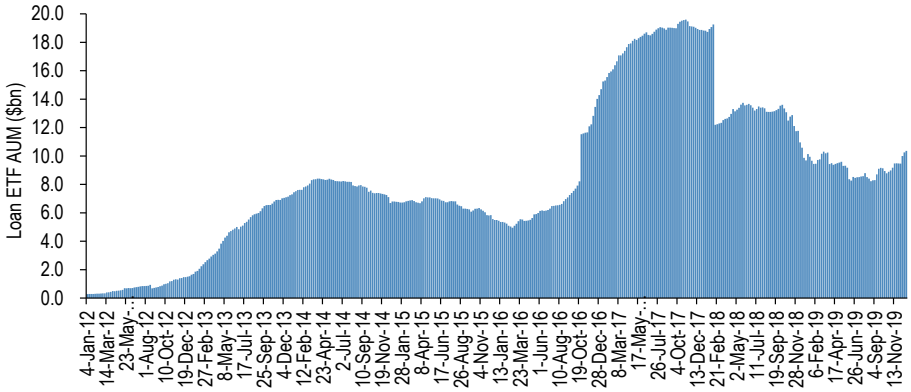
Figure 3: Loan retail fund AUM fell 27% in 2019



Source: Lipper FMI.

The loan ETFs didn't play a large role in contributing to 2019's heavy outflows. The Loan ETFs experienced only $150mn of outflows in 2019, as compared to $2.4bn of outflows in 2018 and inflows of $3.8bn and $5.4bn in 2017 and 2016. For reference, the Loan ETFs had experienced $6.8bn of inflows between January 2013 and March 2014. Accounting for the bulk of growth within the loan ETF universe, the market capitalization of the BKLN ETF is currently $6.5bn, comparable to $1.7bn at YE2012 and a mere $195mn at YE2011. For context, total Loan ETF AUM stood at $10.0bn at YE2019, or 10.3% of a $97bn universe of retail funds tracked by Lipper.

Figure 4: Loan ETF AUM



Source: Lipper FMI.

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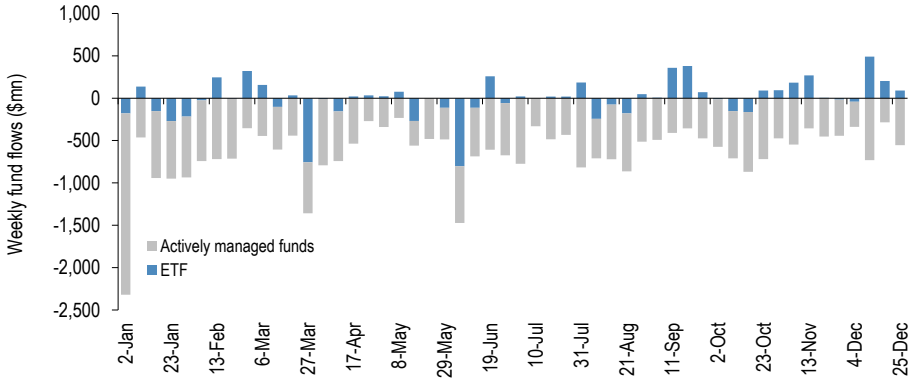
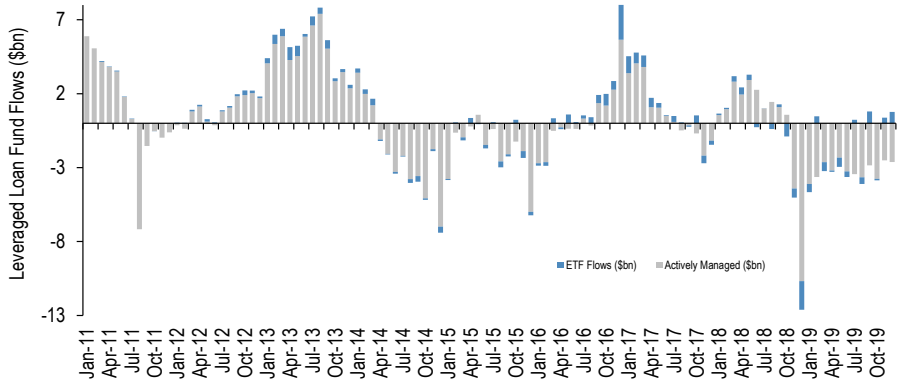
While high yield flows faced some volatility and sporadic outflows among a major influx of capital in 2019, loan flows were consistently negative throughout the year. Loan outflows extended their run in 4Q18, with December 2018's record outflow of $12.6bn followed by $4.7bn flowing out of the loan market in January. Though outflows tempered slightly in the following months, they were steadily around or above the $3.0bn mark through August. Outflows spiked slightly in August ($4.1bn) amid increased global volatility, but were lower in September as the week of September 16th saw the only weekly influx in 2019. Outflows tapered off as the year came to an end with capital market activity booming in the last quarter of the year, and markets rising considerably in December. Nevertheless, 51 weekly outflows in 52 weeks meant 2019 set the new record for heaviest outflows in a year (-$38.1bn)

Figure 5: Weekly flows for actively managed loan funds and ETFs



Source: Lipper FMI.

Figure 6: Consistent outflows in the loan market led to the largest annual capital exit on record



Source: Lipper FMI.

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Table 1: Only three of 2019's weekly outflows exceeded $1bn. Only one weekly inflow throughout 2019

	Leveraged Loan Funds	
Week ending	**Inflow ($mn)**	**% of AUM**
18-Sep-19	24	0.03%
27-Feb-19	(33)	-0.04%
11-Sep-19	(51)	-0.07%
18-Dec-19	(82)	-0.12%
13-Nov-19	(88)	-0.13%
21-Aug-19	(864)	-1.19%
16-Oct-19	(869)	-1.26%
27-Mar-19	(1,358)	-1.62%
5-Jun-19	(1,473)	-1.86%
2-Jan-19	(2,320)	-2.62%

Source: Lipper FMI.

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CLO 2020 Outlook

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CLO 2020 Outlook: Keep Calm and Earn Carry

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As originally published on November 26, 2019 as part of the "CLO 2020 Outlook"

- Despite some views that CLO activity precipitously declines, YTD supply of $110bn and €28bn is closing in on our FY forecasts of $115-125bn and €30bn. We maintain our October 25th forecast of -20% to $90-100bn and -13% to €26bn in 2020 (saturated manager base, etc). The election is a wildcard, but $90-100bn net new US CLO supply is a (reasonable) majority of $175bn net Loan supply and is similar to $100bn net High Yield supply in 2020.
- We would be forgiven for having a negative outlook, as the CLO market licks its wounds from low returns and high dispersion. Instead, we think the -9% decline in spread product supply to a three year low, the ECB's re-emergence as a large price-insensitive buyer, low yields globally, and less CLO supply are all supportive of CLO spreads, which are closer to cycle wides than some markets.
- We forecast ~5bp tightening in primary CLO AAAs to L+135bp by end-2020, holding back rosier expectations given the risk of Fed easing in response to below-trend growth in late 2019/early 2020 (note: High Grade is expected to tighten more: -15bp to 125bp). We target 4.0% CLOIE return (YTD 4.6%) and would be selective in mezzanine (buy higher-quality as dispersion rises).
- Defaults may be low (0.49%) in CLOs, but loan ratings are in focus. Our high-frequency tracker shows LTM loan upgrade/downgrade ratio of 0.44, the weakest since October 2009. Of 94 managers 43% have a better-than-average ratio (see Exhibit 14 at the end of this note).
- If CCC loans price similar to the last downturn ($40), CCC buckets need to rise from ~4% currently to the teens (~15.5%) for cashflow diversion. For now, performance is stable: our early read is 13% average CLO equity cashflow in 2019 (803 deals). As "idiosyncratic risk" became a (perhaps clichéd) buzzword, CLO managers increased their sales of B1-B3 loans (58% to 66%) by a similar proportion that they decreased sales of Ba3/above loans (35% to 26%).
- Buy higher-quality CLO BBs
- Buy or hold 2017/2018 vintage CLO Equity
- Rotate from CLO Primary A to AA

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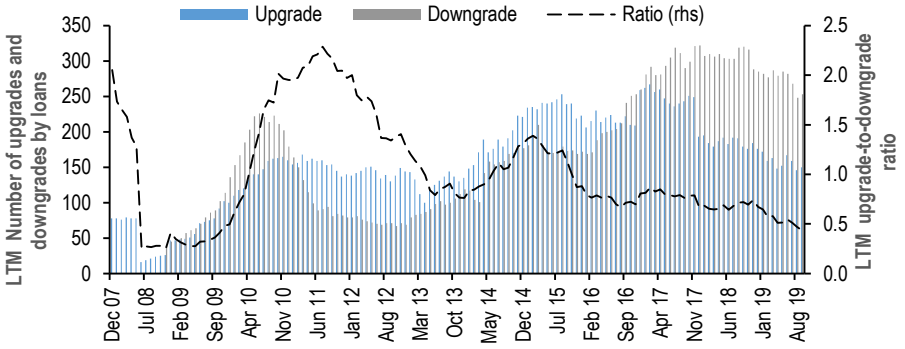
Despite some views that CLO activity would precipitously decline, YTD issuance of $110bn and €28bn is edging close to our FY19 forecasts of $115-125bn and €30bn. We maintain our October 25th forecast of -20% to $90-100bn and -13% to €26bn y-o-y (saturated manager base, etc.). The election is a wildcard, but $90-100bn net new US CLO supply is a (reasonable) majority of $175bn net Loan supply and is similar to $100bn net High Yield supply in 2020.

We would be forgiven for having a negative outlook as the CLO market licks its wounds from low returns and high dispersion (Exhibits 2 and 3). Instead, we think the -9% decline in spread product supply to a three year low, the ECB's re-emergence as a large price-insensitive buyer, low yields globally, and less CLO supply are all supportive of CLO spreads, which are closer to cycle wides than some markets (Exhibit 5). We forecast ~5bp tightening in primary CLO AAAs to L+135bp by end-2020, holding back rosier expectations given the risk of Fed easing in response to below-trend growth in late 2019/early 2020 (note: High Grade is expected to tighten more: -15bp to 125bp). We target 4.0% CLOIE return (YTD 4.6%) and would be selective in mezzanine (buy higher-quality as dispersion rises).

As "idiosyncratic risk" became a (perhaps clichéd) buzzword, CLO managers increased their sales of B1-B3 loans (58% to 66%) by a similar proportion that they decreased sales of Ba3/above loans (35% to 26%). But they were opportunistic, too, buying B3s in June as prices rose, then slowing as B3s underperformed. Who were the most risk-averse? Using our new upgrade/downgrade ratio 41 (or 43%) of the 94 managers have a better-than-average ratio and of these 41, 17 managers also improved the ratio since January (see Exhibit 14 at the end).

Let's not gloss over credit quality (Exhibits 6 and 7). Defaults may be low (0.49%) in CLOs, but loan ratings are in focus. Our high-frequency tracker shows LTM loan upgrade/downgrade ratio of 0.44, the weakest since October 2009 (Exhibit 1). If CCC loans price similar to the last downturn ($40), CCC buckets need to rise from ~4% currently to the teens (~15.5%) for cashflow diversion. For now, performance is stable: our early read is 13% average CLO equity cashflow in 2019 (803 deals).

Exhibit 1: Leveraged loan upgrade/downgrade ratio is the weakest since October 2009



Source: J.P. Morgan. Based on the count of loans in the JPM Loan Index with monthly ratings changes in Moody's and S&P combined. As of September 30th, 2019.

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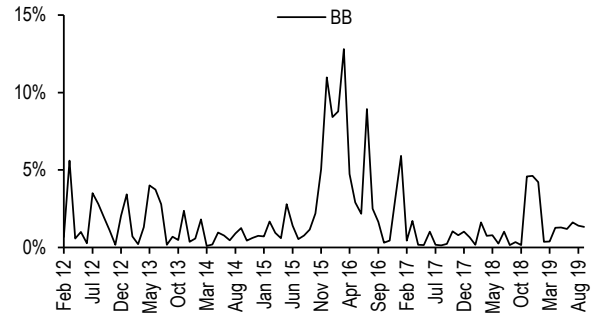
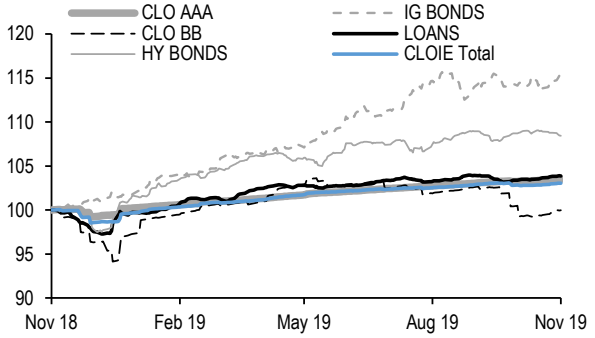
Exhibit 2: CLOIE BB index monthly total return dispersion



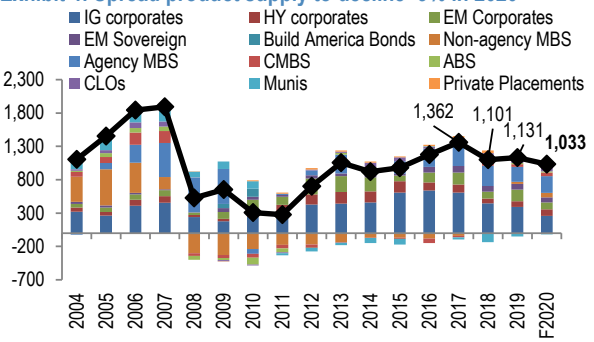
Source: J.P. Morgan. September 30th, 2019. Difference between 75th/25th percentiles.

Exhibit 3: LTM Cumulative Total Returns



Source: J.P. Morgan. As of November 21st, 2019. Based on JPM CLOIE, JULI, JPM HY Domestic Bond and JPM Lev Loan indices.

Exhibit 4: Spread product supply to decline -9% in 2020



Source: J.P. Morgan. Net Issuance across Fixed Income Products excl Treasuries and Agency Debt.

Exhibit 5: CLO spreads are closer to cycle wides

	Normalized Current Spread in 8Y Range	Current Level	8-Year Spread Range	Low	High
CLO AAA	57%	139	98 170	98	170
CLO AA	39%	213	140 325	140	325
CLO A	41%	290	180 450	180	450
CLO BBB	37%	418	265 675	265	675
CLO BB	57%	808	523 1025	523	1025
HY Bonds	24%	489	355 920	355	920
HY Loans	43%	514	379 693	379	693
IG Bonds	22%	143	108 264	108	264
CMBS AAA	31%	95	62 170	62	170
EUR IG Bonds	20%	115	78 263	78	263

Source: J.P. Morgan. CLO AAA to BB refers to primary spread range since 2011. As of November 21st, 2019.

Relative value

We expect 4% total return for the CLOIE in 2020, down from 4.6% YTD, on the risk of Fed easing in response to below-trend growth in late 2019. We expect primary US CLO AAAs to only tighten ~5bp in 2020 to a mid-point L+135bp (current L+139bp) with credit curve steepening. The lower supply technical, in CLOs and broader spread products, as well as low/negative-yielding global debt, support some compression. This expected ~5bp move tighter recoups some of this year's widening, but not all, as L+135bp is 10bp wider than at end-2018 (loan credit quality acting as a backstop). CLO spreads are closer to 8-year wides than comparables which creates opportunities (Exhibit 5). Still, portfolio risk dispersion is rising and the CLO credit curve is steepening so we'd be careful with the weaker cohort of B to BB tranches given par burn for many managers and rising loan-only and B3/B- loan holdings. CLO BB primary spreads widened 45bp this year on the back of collateral quality concerns, but remain ~200bps away from cycle wides in March 2016. We'd prefer BBs with cleaner, better-than-average portfolios and give up some optical return as we expect dispersion to keep rising.

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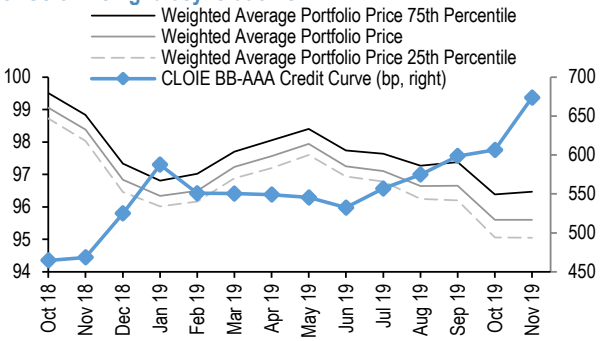
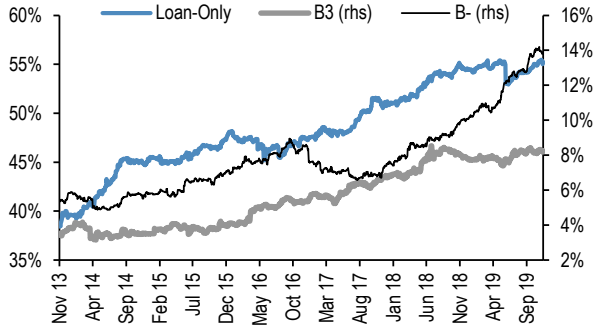
Exhibit 6: Higher dispersion and steepening credit curve in CLOs on rising idiosyncratic risk



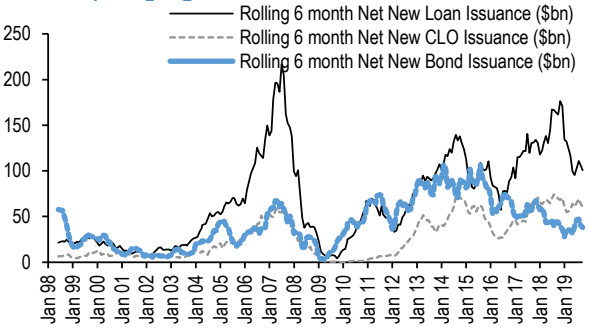
Source: J.P. Morgan, INTEX. Weighted average portfolio price based on up to 986 US BSL CLOs with deal factor >80%, including new CLOs 6 months after pricing. Credit curve based on JPM CLOIE index. As of November 15th, 2019.

Exhibit 7: Leveraged loan quality has been deteriorating by a number of measures



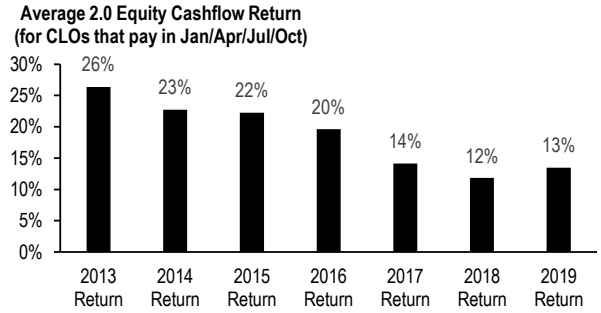
Source: J.P. Morgan. Based on JPM Leveraged Loan Index. As of November 21st, 2019.

Exhibit 8: CLO activity is moderating but still dominates Loans and is outpacing High Yield



Source: J.P. Morgan. As of November 21st, 2019. Excludes refinancings, repricings, resets.

Exhibit 9: Early read on 2019 annual US CLO cashflow return



Source: J.P. Morgan, INTEX. Based on 803 US CLOs from 2012-2018 original vintages with debt currently outstanding and a Jan/Apr/Jul/Oct pay schedule. Excludes static and Middle Market CLOs. Cashflow returns are calculated as cashflow payments divided by equity notional (adjusted for upsize/downsize).

Supply

We expect US CLO net new supply of $90-100bn ($95bn midpoint), -20% y-o-y and European CLO net new supply of €26bn, -13% y-o-y, based on our FY19 forecasts of $115-125bn and €30bn. US CLOs' $90-100bn is similar to expected High Yield ($100bn) and the majority of Loans ($175bn). Since 2012, CLOs account for an average 46% of net loan supply but rose to 59% YTD, slightly higher than our 2020 view (~50-55%). We incorporate the tight arbitrage, collateral risk, saturated manager base (etc., see Preliminary 2020 Global CLO Supply Forecast). CLO equity cashflow returns have been decreasing since 2013 but stabilized (ticked up to 13% this year for CLOs that made an October payment, Exhibit 9). Bifurcation in loan spreads and quality presents opportunities for CLOs, which generally target high Single-B or BB rated assets (given rating limits). As CLOs reshape leveraged credit, we expect supply to be down but not out: global CLO market size just shy of $1 trillion ($945bn) by end-2020 (+$100bn Global y-o-y: +$75bn US, +$25bn Euro). CLO refinancing, reset and re-issue volume has declined ($41bn YTD) and will remain low ($20-30bn US CLO refi/reset/re-issue forecast). Majority of CLOs are 'out of the money' when observing AAA coupons (tight to current levels) indicating low callability despite high volumes exiting non-call period next year (Exhibit 11). We have seen some AAA-only refinancings this year and this trend may continue but will depend on the term curve. Also, some CLOs approaching the end of reinvestment may look to reset and extend, however, the economics and seasoning collateral will challenge this.

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Exhibit 10: The CLO manager base is increasingly saturated

Market	US New Issue			EUR New Issue		
Year	Amount ($bn)	Mngr Count	New Mngr Count	Amount (€bn)	Mngr Count	New Mngr Count
2012	55.71	68	18			
2013	86.08	90	12	7.77	16	0
2014	124.10	100	11	14.49	17	1
2015	99.07	83	6	13.56	23	5
2016	72.42	80	7	16.82	29	5
2017	118.07	94	8	19.12	31	3
2018	129.73	108	6	27.27	40	3
2019 YTD	110.09	106	10	28.18	49	8

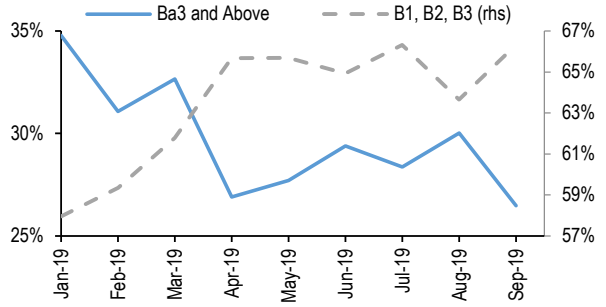
Source: J.P. Morgan. As of November 21st, 2019.

Exhibit 11: CLOs exiting non-call in 2020 by current AAA spread

$bn	Exiting Non-call by end-2020	Q1	Q2	Q3	Q4
≤100bp	43.40	8.1	21.8	7.7	5.8
100bp < X ≤110bp	85.43	14.9	27.8	35.8	7.0
110bp < X ≤120bp	126.19	29.1	10.9	30.2	56.0
120bp < X ≤130bp	106.37	11.1	23.2	31.3	40.9
130bp < X ≤140bp	15.74	1.6	7.9	4.4	1.9
140bp < X ≤150bp	9.51	2.4	1.0	2.7	3.4
150bp < X ≤160bp	4.79	1.6	0.0	1.9	1.3
160bp < X ≤170bp	1.86	0.9	0.6	0.4	0.0
>170bp	0.00	0.0	0.0	0.0	0.0
Total	393.28	69.6	93.2	114.3	116.2
Total >140bp	16.16	4.9	1.6	5.0	4.7

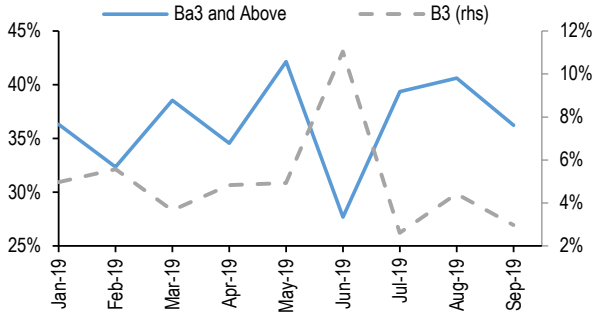
Source: J.P. Morgan. Excludes Middle Market CLOs. AAA spread based on largest outstanding AAA tranche. Includes CLO exiting non-call period in 2020, has a reinvestment end date in or after 2020 and a deal factor >90%.

Exhibit 12: Rating distribution of loan sale activity



Source: J.P. Morgan, INTEX. Based on Moody's ratings as of month-end. Based on 709 Post-Crisis US CLOs. Excludes Middle Market CLOs, CLOs out of reinvestment period, CLOs that haven't made a first payment (as of 1/1/19), or with deal factor <95%. Excludes CLOs with greater than 7.5% CCC buckets. Trading activities are as of September 30th, 2019.

Exhibit 13: Rating distribution of loan purchase activity



Source: J.P. Morgan, INTEX. Based on Moody's ratings as of month-end. Based on 709 Post-Crisis US CLOs. Excludes Middle Market CLOs, CLOs out of reinvestment period, CLOs that haven't made a first payment (as of 1/1/19), or with deal factor <95%. Excludes CLOs with greater than 7.5% CCC buckets. Trading activities are as of September 30th, 2019.

Performance

It is unsurprising in a year when "idiosyncratic risk" was a (perhaps clichéd) buzzword, CLO managers increased sales of B1-B3 loans (from 58% to 66%) by a similar proportion that they decreased sales of less-risky Ba3 and above loans (from 35% to 26%) (Exhibit 12). The monthly average sales volumes of B1-B3 and Ba3/above are $3.7bn and $1.7bn, respectively, and total 2019 sales volumes of B1-B3 and Ba3/above are $33bn and $16bn. It is interesting that B3 purchases picked up in June as loan prices started rising in early summer (April –May), but slowed as B3 underperformed Ba3 prices after June (Exhibit 13). For context, the monthly average purchase volumes of B3 is $484mn, with maximum $1.2bn in June. Overall trading is reflected in lower B3 purchase and higher B1-B3 sales, elevated due to rising idiosyncratic risk. Also, for Caa1 or less, sales are much higher than purchases but are generally a small portion of trades. Sales of Caa1 or less ranges from 5% to 10% of monthly sales volumes, while purchase of Caa1 or less is 1-2% of monthly purchase volumes. In total, our analysis covers 124,522 sales trades of $56bn and 153,973 purchase trades of $97bn this year through Sept 30th.

Our new high-frequency tracker combining issue-level Moody's and S&P ratings changes in loans shows a LTM upgrade/downgrade ratio of 0.44, the weakest since October 2009. CLO managers' current upgrade-to-downgrade ratio is a similar 0.46 (Exhibit 14). We observe current holdings of loans that had a rating change by either Moody's or S&P in the last twelve months to calculate the upgrade-to-downgrade ratio (by loan count). Less than half (41 or 43%) of the 94 managers in the analysis has a better-than-average ratio, of these 41, 17 managers also improved the ratio since January.

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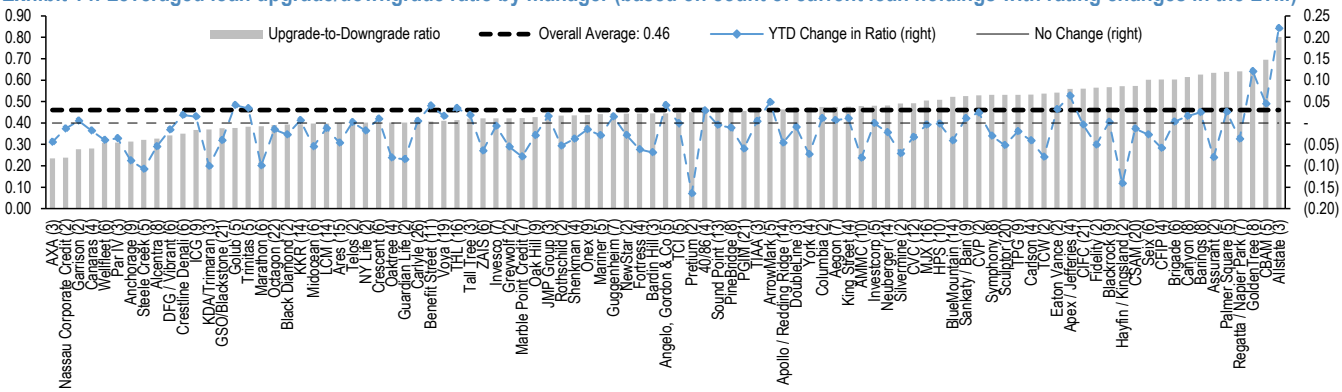
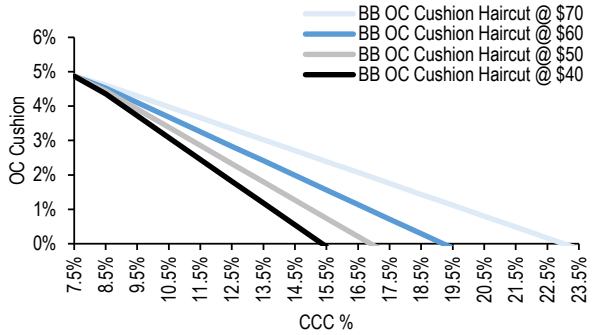
Exhibit 14: Leveraged loan upgrade/downgrade ratio by manager (based on count of current loan holdings with rating changes in the LTM)



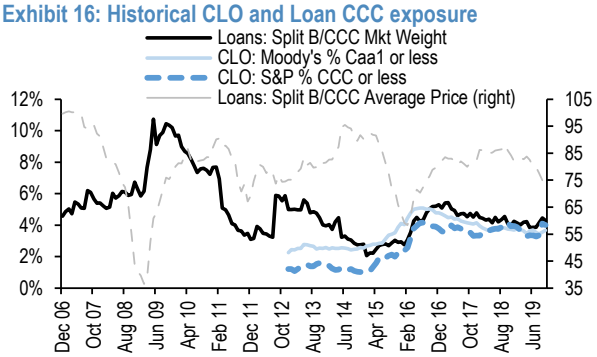
Source: J.P. Morgan, INTEX. Based on 709 Post-Crisis US CLOs. Excludes Middle Market CLOs, CLOs out of reinvestment period, CLOs that haven't made a first payment (as of 1/1/19), or with deal factor <95%. Excludes CLOs with greater than 7.5% CCC buckets. As of September 30th, 2019 portfolio holdings and YTD change based on January 2nd, 2019 portfolio holdings. Ratio is based on the current holdings count of loans with a rating change by Moody's or S&P in the last twelve months. Shows managers with at least 2 CLOs in the sample.

Exhibit 15: CCC bucket to fail OC cushion



Source: J.P. Morgan, INTEX. The US CLO used in this analysis is a 4Q2017 vintage CLO with a 7.5% CCC covenant limit. The BB OC Cushion is the most junior tranche

Exhibit 16: Historical CLO and Loan CCC exposure



Source: J.P. Morgan, INTEX. As of November 15th, 2019.

US CLOs continue to have low default exposure: 0.49% across 1,003 CLOs ($2.37bn of $482bn collateral). This is expected as broader loan market defaults have been relatively benign, though the LTM default rate is +27bps y-o-y to 1.65% in October. Our colleagues forecast 2% and 3% loan default rate and 3% and 3.5% HY bond default rate in 2020 and 2021. On ratings, Moody's Caa1 and S&P CCC or less tests have remained relatively stable around 4% and the percentage of CLOs failing these tests remains low at 2.4% or 22 CLOs (Moody's) and 5.9% or 44 CLOs (S&P). However, rating downgrades are a concern given the lowest upgrade-to-downgrade ratio since October 2009 (0.44), growth of marginal rated assets (B3, B-) and risk to CLO OC cushions[1]. **How much can CCC exposure grow before OC tests fail?[2]** At current CCC prices (~$70) our analysis suggests a CCC bucket of 23.5% (vs current ~4% exposure) would cause a failed BB OC test (the junior most tranche in our analysis) and trigger cashflow diversion. However, if the market value of CCC assets declines to $40 for example (2008-like scenario) a 15.5% CCC bucket would trigger the BB OC cushion. Our analysis does not assume defaults which may cause cashflow diversion to happen with smaller CCC buckets, depending on default environment and recoveries. Also of note, the distressed loan universe (less than $80 price) now totals $63.5bn, or 5.2% of outstanding, up from $29.6bn at year-end 2018. This compares to $99bn, or 12% of outstanding in Feb-2016.

[1] CLOs are generally structured with 7.5% maximum CCC bucket. CCC exposure in excess is in most cases haircut and held at market value.

[2] Using Intex, the analysis assumes CCC buckets based on our inputs (ranging from 7.5%-23.5%) and calculates OC tests at the next payment date.

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2020 Trade Ideas

- **Buy cleaner CLO BBs**
  CLOIE BB index yield (9.5%) and spread (~800bp) offer a pickup to HY/Loans (6.5%/6.7% and 480bp/515bp), but given credit risk and increasing dispersion target pools with less exposure to loan-only and B3/B-.
- **Buy or hold 2017/2018 vintage CLO Equity**
  Recent vintage equity outperformed YTD (14.7% 2017 vintage, 16.6% 2018 vintage vs 13% average). Such equity has low funding cost and is reinvesting.
- **Rotate from CLO Primary A to AA**
  The basis has narrowed this year from 100bp to 73bp, as AA has widened 13bp and Single-A has tightened 15bp, indicating value in AA.

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4Q19 leveraged loan fund analysis

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4Q19 leveraged loan fund analysis

- The ten largest borrowers held in leveraged loan portfolios at the end of 4Q19 were: Asurion (1.58%), Transdigm (0.99%), CSC Holdings (0.95%), SFR Group (0.88%), Sprint Nextel (0.83%), Caesars Resort Collection (0.81%), CenturyLink (0.79%), Bausch Health (0.77%), Micro Focus (0.74%), and Bass Pro Shops (0.72%). The largest over-weights among the top 30 borrower exposures held at the end of 4Q19 relative to the J.P. Morgan Leveraged Loan Index were Asurion (+94bp, or +70bp versus an index inclusive of second liens), Kronos (+52bp), Intelsat (+43bp), and Caesars Resort Collection (+42bp). The only under-weight vs the Index among the top 30 was Financial & Risk US Holdings (-12bp).

- At the end of 4Q19, loan funds maintained an overweight of +240bp to lower-quality loans (Split B/CCC and default). However, loan funds also maintained an overweight of +140bp to higher-quality loans (investment grade, Split BBB, and BB loans), somewhat offsetting their position in lower-quality loans. Loan funds also maintained a below benchmark weighting of -220bp to Split BB and B loans.

- Loan funds maintained a 2.69% exposure to second-lien loans (-2bp q/q), compared with 4.47% (-32bp q/q) for our Leveraged Loan and Second Lien Loan Indices combined. This is indicative of a 178bp underweight of second liens by loan funds. Compared to this more inclusive index, loan funds are more conservatively positioned, maintaining a -123bp underweight of lower-tier loans and a +240bp OW versus the Loan Index without second liens. Further, from a yield perspective, loan funds' average yield of 6.29% matches that of the Leveraged Loan Index, but is -31bp below the combined Index's yield of 6.60%.

- The largest market weights in industry exposure for loan funds at the end of 4Q19 were in Technology (14.5%), Services (10.6%), Healthcare (9.7%), and Gaming/Leisure (8.0%), while the smallest industry market weights were in Metals/Mining (1.1%), Transportation (1.3%), Housing (2.1%), and Utility (2.2%). Relative to our Loan Index, the largest overweights by industry for loan funds at the end of 4Q19 were Cable/Satellite (+207bp), Gaming (+129bp), and Telecom (+91bp). The largest underweights were in Healthcare (-184bp), Services (-90bp), and Transportation (-82bp).

- At the end of 4Q19, we estimate cash balances among loan funds were roughly 4.6%, up 0.6% from 4.0% at the end of 3Q, up 2.1% from 2.6% at the end of 4Q18, and comfortably above the 3.8% quarterly average over the last six years. Meanwhile, high-yield funds' allocation to leveraged loans increased 31bp to 4.29% during 4Q19, after being basically unchanged across the year's first three quarters; loan allocations are up 22bp y/y.

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Introduction

The following is a fourth quarter recap and analysis of leveraged loan portfolios. Using our Leveraged Loan Index and the holdings data of loan funds, we analyze and review funds' top holdings, risk profile, industry weightings, and asset allocation, as well as discuss q/q and y/y shifts in investment styles. The data used for this analysis consists of 35 loan fund holdings, with 15 funds sent directly to us with data as of December 31, 2019, and 20 funds gathered from Bloomberg, based on public data as of September 30, October 31, and November 30. For each of the sections below, the analysis is based on these 35 funds, with the exception of the breakdown of assets, as we use only the timelier and more detailed breakdown of the 15 sent funds for this section.

Top holdings

The ten largest borrowers held in leveraged loan portfolios at the end of 4Q19 were: Asurion (1.58%), Transdigm (0.99%), CSC Holdings (0.95%), SFR Group (0.88%), Sprint Nextel (0.83%), Caesars Resort Collection (0.81%), CenturyLink (0.79%), Bausch Health (0.77%), Micro Focus (0.74%), and Bass Pro Shops (0.72%). There was one q/q change among the top ten, as the addition of Bass Pro Shops (+5bp q/q, up from the twelfth ranked holding) replaced Intelsat (-2bp q/q, falling from 10th to 12th ranked holding). Hub International saw the largest q/q increase among the top 30 names in fund exposure, as it's holdings percentage increased 12bp from 0.52% (ranked 21st) to 0.64% (ranked 15th). The second largest q/q increase in fund exposure was in SFR Group, which saw it's holdings percentage increase 9bp from 0.79% to 0.88% (up one notch in the ranking from 5th to 4th). Notably, the borrowers among the top thirty largest holdings amongst loan funds that saw the largest q/q decreases in fund exposure were Restaurant Brands and Virgin Media, as fund exposure decreased -7bp apiece in 4Q, lowering them in the rankings from 15th to 19th and from 17th to 24th, respectively. For context, CSC Holdings, Transdigm, and Asurion are the three largest issuers in the J.P. Morgan Leveraged Loan Index, accounting for 0.66%, 0.64%, and 0.64%, respectively, of the Index (0.63%, 61%, and 0.88%, respectively, in an index inclusive of second liens) and are followed by Financial & Risk (56bp), Berry Global (54bp), Charter (54bp), SFR Group (51bp), CenturyLink (50bp), Sprint (50bp), and Restaurant Brands (46bp).

The largest over-weights among the top 30 borrower exposures held at the end of 4Q19 relative to the J.P. Morgan Leveraged Loan Index were Asurion (+94bp, or +70bp versus an index inclusive of second liens), Kronos (+52bp), Intelsat (+43bp), and Caesars Resort Collection (+42bp). The only under-weight vs the Index among the top 30 was Financial & Risk US Holdings (-12bp), while Berry Global (+0bp), Envision (+6bp), and Azko Nobel (+7bp) had very modest over weights. Meanwhile, the largest under-weight based on the top 30 holdings in the JPM Loan Index were American Airlines (-25bp, 0.44% MW in Index and 0.19% in loan funds), Aramark (-15bp, 0.29% vs 0.14%), Sedgewick CMS (-13bp, 0.37% vs 0.24%), and RegionalCare Hospital Partners (-10bp, 0.30% MW in Index and 0.20% MW in loan funds).

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Table 1: Top 30 holdings for leveraged loan funds at the end of 4Q19

Borrower name	% of Loan Funds	% of JPM Lev. Loan Index	% of JPM Lev. Loan Index plus Second Lien Index	LL Funds Over/Under vs JPM LL Index	Average yield to 3yr takeout	Industry
Asurion Corporation	1.58%	0.64%	0.88%	0.94%	5.63%	Services
Transdigm	0.99%	0.64%	0.61%	0.35%	4.07%	Industrials
CSC Holdings	0.95%	0.66%	0.63%	0.29%	3.93%	Cable/Satellite
SFR Group SA	0.88%	0.51%	0.49%	0.37%	5.06%	Cable/Satellite
Sprint Nextel Corporation	0.83%	0.50%	0.48%	0.33%	4.62%	Telecommunications
Caesars Resort Collection	0.81%	0.39%	0.38%	0.42%	4.38%	Gaming/Leisure
CenturyLink	0.79%	0.50%	0.48%	0.28%	4.29%	Telecommunications
Bausch Health Companies	0.77%	0.44%	0.42%	0.32%	4.46%	Healthcare
Micro Focus	0.74%	0.37%	0.35%	0.38%	4.03%	Technology
Bass Pro Shops	0.72%	0.35%	0.34%	0.37%	6.90%	Retail
Kronos Incorporated	0.72%	0.20%	0.27%	0.52%	5.94%	Technology
Intelsat	0.70%	0.27%	0.25%	0.43%	5.68%	Cable/Satellite
SS&C Technologies	0.70%	0.45%	0.43%	0.25%	3.69%	Technology
Charter Communications Holdings	0.66%	0.54%	0.51%	0.12%	3.20%	Cable/Satellite
Hub International	0.64%	0.38%	0.36%	0.26%	4.51%	Financial
Nexstar Broadcasting	0.62%	0.36%	0.34%	0.26%	4.04%	Broadcasting
Ziggo Bond Company BV	0.62%	0.22%	0.21%	0.40%	3.90%	Cable/Satellite
The Stars Group	0.55%	0.26%	0.25%	0.28%	4.78%	Gaming/Leisure
Restaurant Brands	0.55%	0.46%	0.44%	0.09%	3.38%	Food/Beverages
Reynolds Group Issuer	0.55%	0.28%	0.26%	0.27%	4.33%	Paper/Packaging
Berry Global	0.53%	0.54%	0.51%	0.00%	3.50%	Paper/Packaging
Flex Acquisition Co Inc	0.53%	0.23%	0.22%	0.29%	5.19%	Paper/Packaging
Infor US Inc	0.52%	0.18%	0.17%	0.34%	4.22%	Technology
Virgin Media	0.51%	0.28%	0.27%	0.23%	3.89%	Cable/Satellite
Misys PLC	0.50%	0.28%	0.37%	0.22%	6.50%	Technology
Pharmaceutical Product Development	0.46%	0.27%	0.25%	0.20%	4.20%	Healthcare
Envision Healthcare	0.45%	0.39%	0.37%	0.06%	11.38%	Healthcare
Financial & Risk US Holdings	0.43%	0.56%	0.53%	-0.12%	4.60%	Services
Uber Technologies	0.43%	0.22%	0.21%	0.21%	5.90%	Technology
Akzo Nobel Specialty Chemicals	0.43%	0.36%	0.34%	0.07%	4.92%	Chemicals
Top 30 Total	**20.13%**	**11.72%**	**11.65%**		**4.84%**	

Source: J.P. Morgan.

Some other interesting observations:

- Of the top 30 holdings, CSC Holdings was the most commonly held, as 33 of the 35 funds in our sample set owned exposure to the borrower. Asurion (held by 32 of 35 funds), Transdigm (32), Sprint (32), and Bausch (32) were also widely held by loan funds. Meanwhile Uber Technologies (15 funds), Kronos (17), Infor US (17), and Intelsat (18) were the least commonly held.

- The average yield at the end of the quarter for the top 30 issuers was 4.84%, up 9bp from 4.75% at the end of 3Q, and 145bp tight of the yield for the JPM Leveraged Loan Index (6.29%). Notably, the highest yielding name among the top 30 holdings at the end of 4Q was Envision Healthcare (11.4%). Other high-yielding names as of December 31st were Bass Pro (9.9%) and Misys (6.5%). The lowest yielding issuers among the top 30 holdings were Charter (3.2%), Restaurant Brands (3.4%), and Berry Global (3.5%).

- Cable/Satellite and Technology were the most represented industry among the top 30 holdings, with six companies apiece from the sectors, followed by Paper/Packaging and Healthcare with three each.

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Table 2: Ownership trends for the top 30 holdings

Borrower name	% of Loan Funds	Arithmetic average	Median	Standard deviation	High	Number of funds that own exposure	Percent of funds that own exposure	Average for funds that own it	Number of funds that do not own exposure
Asurion Corporation	1.58%	1.35%	1.18%	1.05%	4.53%	32	91.4%	1.47%	3
Transdigm	0.99%	0.84%	0.85%	0.46%	1.96%	32	91.4%	0.92%	3
CSC Holdings	0.95%	0.93%	0.85%	0.64%	2.95%	33	94.3%	0.99%	2
SFR Group SA	0.88%	0.79%	0.69%	0.56%	2.44%	30	85.7%	0.93%	5
Sprint Nextel Corporation	0.83%	0.93%	0.82%	0.68%	2.90%	32	91.4%	1.02%	3
Caesars Resort Collection	0.81%	0.75%	0.75%	0.59%	2.21%	28	80.0%	0.93%	7
CenturyLink	0.79%	0.76%	0.78%	0.69%	2.61%	25	71.4%	1.06%	10
Bausch Health Companies	0.77%	0.76%	0.65%	0.66%	2.94%	32	91.4%	0.83%	3
Micro Focus	0.74%	0.49%	0.39%	0.48%	1.68%	23	65.7%	0.75%	12
Bass Pro Shops	0.72%	0.58%	0.46%	0.79%	3.43%	25	71.4%	0.81%	10
Kronos Incorporated	0.72%	0.48%	0.00%	0.81%	4.15%	17	48.6%	0.99%	18
Intelsat	0.70%	0.51%	0.34%	0.71%	2.63%	18	51.4%	0.99%	17
SS&C Technologies	0.70%	0.61%	0.69%	0.45%	1.71%	29	82.9%	0.74%	6
Charter Communications Holdings	0.66%	0.53%	0.43%	0.57%	2.06%	24	68.6%	0.78%	11
Hub International	0.64%	0.61%	0.58%	0.42%	1.72%	30	85.7%	0.71%	5
Nexstar Broadcasting	0.62%	0.55%	0.54%	0.39%	1.63%	30	85.7%	0.64%	5
Ziggo Bond Company BV	0.62%	0.39%	0.28%	0.49%	2.11%	19	54.3%	0.72%	16
The Stars Group	0.55%	0.40%	0.40%	0.39%	1.48%	22	62.9%	0.64%	13
Restaurant Brands	0.55%	0.52%	0.45%	0.50%	1.77%	26	74.3%	0.70%	9
Reynolds Group Issuer	0.55%	0.49%	0.38%	0.48%	2.01%	28	80.0%	0.61%	7
Berry Global	0.53%	0.58%	0.42%	0.52%	2.25%	28	80.0%	0.72%	7
Flex Acquisition Co Inc	0.53%	0.50%	0.49%	0.51%	2.22%	25	71.4%	0.70%	10
Infor US Inc	0.52%	0.28%	0.00%	0.39%	1.24%	17	48.6%	0.58%	18
Virgin Media	0.51%	0.33%	0.20%	0.35%	1.19%	22	62.9%	0.52%	13
Misys PLC	0.50%	0.44%	0.37%	0.40%	1.20%	25	71.4%	0.61%	10
Pharmaceutical Prod. Development	0.46%	0.39%	0.24%	0.45%	1.48%	20	57.1%	0.68%	15
Envision Healthcare	0.45%	0.35%	0.35%	0.29%	0.96%	25	71.4%	0.48%	10
Financial & Risk US Holdings	0.43%	0.46%	0.35%	0.59%	2.39%	21	60.0%	0.77%	14
Uber Technologies	0.43%	0.25%	0.00%	0.36%	1.20%	15	42.9%	0.59%	20
Akzo Nobel Specialty Chemicals	0.43%	0.36%	0.31%	0.38%	1.23%	20	57.1%	0.62%	15

Source: J.P. Morgan.

Risk profiles

At the end of 4Q19, based on exposure to rating categories relative to the Loan Index, leveraged loan funds maintained a moderately aggressive risk profile. Specifically, **loan funds maintained an overweight of +240bp to lower-quality loans (Split B/CCC and default). However, loan funds also maintained an overweight of +140bp to higher-quality loans (investment grade, Split BBB, and BB loans), somewhat offsetting their position in lower-quality loans.** Loan funds also maintained a below benchmark weighting of -220bp to middle-quality loans (Split BB and B) and a -156bp underweight to non-rated loans. Out of 35 loan funds, 24 (69%) maintained an overweight to lower-tier loans, while 17 (49%) maintained an overweight to upper-tier loans.

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Table 3: Loan fund exposure by rating

31-Dec-19	Loan Fund Aggregate	J.P. Morgan Leveraged Loan Index	LL Funds Over/Under vs JPM LL Index	Arithmetic average	Median	Standard deviation	High	Low
Investment Grade	2.06%	2.12%	-0.06%	1.91%	1.24%	1.93%	6.41%	0.00%
Split BBB	5.12%	5.92%	-0.80%	5.13%	5.21%	2.55%	12.18%	0.63%
BB	21.92%	19.66%	2.26%	21.44%	21.02%	5.55%	35.63%	10.85%
Split BB	11.35%	8.90%	2.45%	10.80%	11.12%	2.10%	15.13%	6.09%
B	51.36%	56.01%	-4.65%	53.66%	52.97%	9.65%	76.58%	28.72%
Split B/CCC	6.48%	4.54%	1.94%	5.85%	5.41%	2.52%	13.02%	1.51%
Default	0.47%	0.00%	0.47%	0.31%	0.16%	0.41%	1.92%	0.00%
Not Rated	1.24%	2.79%	-1.56%	0.90%	0.66%	1.11%	5.07%	0.00%
Upper-tier loans	29.10%	27.71%	1.40%	28.48%	26.94%	8.96%	52.90%	11.98%
Middle-tier loans	62.71%	64.91%	-2.20%	64.46%	65.18%	9.36%	84.02%	34.96%
Lower-tier loans	6.95%	4.54%	2.40%	6.16%	5.63%	2.61%	13.31%	1.51%

Source: J.P. Morgan.

During the fourth quarter, loan funds increased their exposure to lower-tier loans by 18bp to 6.95%, while the Loan Index's lower-quality exposure increased 9bp to 4.54%. **As a result, the funds' overweight in lower-tier loans increased 10bp q/q from +230bp to +240bp.** In addition, loan funds' exposure to higher-quality loans increased 147bp in the fourth quarter to 29.10%, and factoring in the Loan Index's higher-quality exposure decrease of 32bp, funds' underweight of upper-tier loans of -39bp at the end of 3Q19 changed to a 140bp overweight at the end of 4Q19.

Table 4: Shifts in loan fund exposure by rating

	Loan Fund Aggregate					J.P. Morgan Leveraged Loan Index				
	31-Dec-18	30-Sep-19	31-Dec-19	Q/Q change	Y/Y change	31-Dec-18	30-Sep-19	31-Dec-19	Q/Q change	Y/Y change
Investment Grade	2.19%	1.84%	**2.06%**	0.22%	-0.13%	3.02%	2.23%	**2.12%**	-0.11%	-0.89%
Split BBB	5.40%	4.61%	**5.12%**	0.51%	-0.28%	6.81%	5.67%	**5.92%**	0.25%	-0.89%
BB	21.57%	21.19%	**21.92%**	0.73%	0.36%	20.46%	20.13%	**19.66%**	-0.46%	-0.80%
Split BB	12.96%	12.04%	**11.35%**	-0.69%	-1.61%	11.49%	9.98%	**8.90%**	-1.07%	-2.59%
B	50.06%	52.41%	**51.36%**	-1.05%	1.30%	51.48%	54.80%	**56.01%**	1.21%	4.52%
Split B/CCC	5.85%	6.42%	**6.48%**	0.06%	0.63%	4.24%	4.46%	**4.54%**	0.09%	0.31%
Default	0.68%	0.34%	**0.47%**	0.13%	-0.21%	0.00%	0.00%	**0.00%**	0.00%	0.00%
Not Rated	1.29%	1.15%	**1.24%**	0.09%	-0.05%	2.50%	2.69%	**2.79%**	0.11%	0.29%
Upper-tier loans	29.16%	27.64%	29.10%	1.47%	-0.06%	30.29%	28.03%	27.71%	-0.32%	-2.58%
Middle-tier loans	63.03%	64.45%	62.71%	-1.74%	-0.31%	62.98%	64.78%	64.91%	0.14%	1.94%
Lower-tier loans	6.52%	6.76%	6.95%	0.18%	0.42%	4.24%	4.46%	4.54%	0.09%	0.31%

Source: J.P. Morgan.

Second-lien exposure

Lastly, loan funds maintained a 2.69% exposure to second-lien loans (-2bp q/q), which are excluded from the J.P. Morgan Leveraged Loan Index. However, if we were to combine the J.P. Morgan Leveraged Loan and Second-Lien Loan Indices to get a full representation of the institutional market inclusive of second liens, the market weight of these loans would be 4.47% (-32bp q/q). This is indicative of a 178bp underweight of second liens by loan funds. **Compared to this more inclusive index, loan funds are more conservatively positioned, maintaining a -123bp underweight of lower-tier loans, as compared with the +240bp OW versus the Loan Index without second liens.** Also, loan funds have a +260bp overweight of upper-tier loans vs the Index including second liens, compared with +140bp OW vs the Index without them. **Further, from a yield perspective, loan funds' average yield of 6.29% matches that of the Leveraged Loan Index (6.29%), but is -31bp below the combined Leveraged Loan and Second-Lien Loan Index's yield of 6.60%.**

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Table 5: Loan funds' rating profile versus the Loan Index including second liens

31-Dec-19	Loan Fund Aggregate	J.P. Morgan Leveraged Loan Index	Difference	JPM Lev. Loan Index plus Second Lien Index	Difference
Investment Grade	2.06%	2.12%	-0.06%	2.03%	0.03%
Split BBB	5.12%	5.92%	-0.80%	5.66%	-0.54%
BB	21.92%	19.66%	2.26%	18.82%	3.11%
Split BB	11.35%	8.90%	2.45%	8.54%	2.81%
B	51.36%	56.01%	-4.65%	53.89%	-2.53%
Split B/CCC	6.48%	4.54%	1.94%	8.10%	-1.63%
Default	0.47%	0.00%	0.47%	0.08%	0.39%
Not Rated	1.24%	2.79%	-1.56%	2.89%	-1.65%
Upper-tier loans	29.10%	27.71%	1.40%	26.50%	2.60%
Middle-tier loans	62.71%	64.91%	-2.20%	62.43%	0.28%
Lower-tier loans	6.95%	4.54%	2.40%	8.18%	-1.23%

Source: J.P. Morgan.

Industry exposure

The largest market weights in industry exposure for loan funds at the end of 4Q19 were in Technology (14.5%), Services (10.6%), Healthcare (9.7%), Gaming/Leisure (8.0%), and Cable (6.2%), while the smallest industry market weights were in the Metals/Mining (1.1%), Transportation (1.3%), Housing (2.1%), Utility (2.2%), and Automotive (2.4%). The J.P. Morgan Leveraged Loan Index maintained the same top four industries, with Financial the fifth largest industry in the Index (6.2%) and Cable falling to the 8th largest industry (4.2%). Meanwhile, four of the five bottom industries were the same, with Broadcasting the fifth smallest industry (2.5%) instead of Housing (6th smallest). **Relative to our Loan Index, the largest overweights by industry for loan funds at the end of 4Q19 were Cable/Satellite (+207bp), Gaming (+129bp), and Telecom (+91bp). The largest underweights were in Healthcare (-184bp), Services (-90bp), and Transportation (-82bp).**

Table 6: Loan fund exposure by industry

31-Dec-19	Loan Fund Aggregate	J.P. Morgan Leveraged Loan Index	LL Funds Over/Under vs JPM LL Index	Arithmetic average	Median	Standard deviation	High	Low
Automotive	2.35%	2.38%	-0.03%	2.42%	2.32%	1.35%	5.48%	0.25%
Broadcasting	3.35%	2.51%	0.84%	3.49%	3.31%	1.52%	6.94%	0.79%
Cable and Satellite	6.22%	4.15%	2.07%	5.28%	5.60%	2.59%	14.03%	0.87%
Chemicals	3.80%	3.79%	0.01%	3.47%	3.03%	2.04%	8.78%	0.45%
Consumer Products	2.36%	2.64%	-0.28%	2.37%	2.19%	1.93%	10.44%	0.19%
Diversified Media	2.92%	3.39%	-0.46%	3.08%	2.46%	1.69%	7.59%	0.27%
Energy	3.24%	3.47%	-0.23%	3.31%	2.84%	1.99%	8.64%	0.15%
Financial	5.87%	6.20%	-0.34%	5.63%	5.23%	2.00%	9.30%	0.82%
Food and Beverages	4.51%	4.27%	0.25%	4.26%	3.75%	1.63%	8.80%	0.98%
Gaming Lodging and Leisure	7.99%	6.69%	1.29%	7.83%	8.04%	2.55%	12.66%	1.65%
Healthcare	9.71%	11.55%	-1.84%	10.34%	10.25%	2.76%	16.47%	3.95%
Housing	2.07%	2.54%	-0.47%	2.78%	2.94%	1.52%	6.17%	0.15%
Industrials	5.42%	5.73%	-0.30%	5.83%	5.62%	1.90%	11.44%	1.40%
Metals and Mining	1.13%	0.85%	0.28%	0.95%	0.78%	0.79%	3.22%	0.00%
Paper and Packaging	2.85%	2.64%	0.21%	3.15%	3.13%	1.27%	5.70%	0.22%
Retail	3.33%	4.00%	-0.67%	3.60%	3.52%	1.96%	10.36%	1.04%
Services	10.63%	11.53%	-0.90%	11.08%	10.35%	3.28%	20.85%	4.97%
Technology	14.52%	13.77%	0.76%	13.27%	14.35%	3.55%	17.97%	4.05%
Telecommunications	4.25%	3.34%	0.91%	4.34%	3.96%	1.56%	8.14%	1.51%
Transportation	1.29%	2.12%	-0.82%	1.26%	0.99%	0.99%	4.54%	0.11%
Utility	2.18%	2.46%	-0.28%	2.41%	1.98%	1.43%	6.08%	0.38%

Source: J.P. Morgan.

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Loan funds increased their exposure to the Cable sector by 44bp in 4Q, the largest increase q/q for loan funds. Meanwhile, the Leveraged Loan Index saw its Cable weighting decrease by -9bp, the seventh largest decrease. Further, loan funds saw their exposure to the Gaming and Technology sectors increase by 32bp and 28bp, respectively, which were the second and third largest q/q increases for loan funds. Meanwhile, the largest industry weight decreases for loan funds took place in Healthcare (-43bp), Paper/Packaging (-39%), and Chemicals sectors (-26bp). Finally, the largest q/q increases and decrease in industry weights for the Index occurred in Energy (+54bp) and Utility (-41bp).

Table 7: Shifts in loan fund exposure by industry

	Loan Fund Aggregate					J.P. Morgan Leveraged Loan Index				
	31-Dec-18	30-Sep-19	31-Dec-19	Q/Q change	Y/Y change	31-Dec-18	30-Sep-19	31-Dec-19	Q/Q change	Y/Y change
Automotive	1.82%	2.32%	**2.35%**	0.03%	0.53%	2.00%	2.43%	**2.38%**	-0.05%	0.38%
Broadcasting	2.67%	3.13%	**3.35%**	0.22%	0.68%	1.65%	2.60%	**2.51%**	-0.09%	0.86%
Cable and Satellite	6.05%	5.78%	**6.22%**	0.44%	0.17%	4.60%	4.23%	**4.15%**	-0.09%	-0.45%
Chemicals	4.38%	4.06%	**3.80%**	-0.26%	-0.59%	4.04%	3.83%	**3.79%**	-0.05%	-0.25%
Consumer Products	2.09%	2.39%	**2.36%**	-0.03%	0.27%	2.72%	2.79%	**2.64%**	-0.15%	-0.07%
Diversified Media	3.12%	2.93%	**2.92%**	0.00%	-0.20%	3.31%	3.17%	**3.39%**	0.21%	0.08%
Energy	3.17%	3.18%	**3.24%**	0.05%	0.07%	3.23%	2.93%	**3.47%**	0.54%	0.24%
Financial	5.52%	5.93%	**5.87%**	-0.06%	0.34%	5.42%	6.09%	**6.20%**	0.11%	0.78%
Food and Beverages	4.58%	4.57%	**4.51%**	-0.06%	-0.07%	4.43%	4.24%	**4.27%**	0.03%	-0.16%
Gaming Lodging and Leisure	7.71%	7.67%	**7.99%**	0.32%	0.28%	6.90%	6.52%	**6.69%**	0.17%	-0.21%
Healthcare	10.49%	10.14%	**9.71%**	-0.43%	-0.78%	11.81%	11.53%	**11.55%**	0.02%	-0.26%
Housing	1.94%	1.96%	**2.07%**	0.11%	0.14%	2.32%	2.47%	**2.54%**	0.07%	0.22%
Industrials	5.53%	5.60%	**5.42%**	-0.18%	-0.10%	5.57%	5.83%	**5.73%**	-0.10%	0.16%
Metals and Mining	1.36%	1.28%	**1.13%**	-0.15%	-0.23%	1.00%	0.95%	**0.85%**	-0.10%	-0.16%
Paper and Packaging	2.96%	3.24%	**2.85%**	-0.39%	-0.11%	2.27%	2.57%	**2.64%**	0.07%	0.37%
Retail	4.06%	3.33%	**3.33%**	-0.01%	-0.73%	4.45%	4.03%	**4.00%**	-0.04%	-0.45%
Services	10.16%	10.62%	**10.63%**	0.01%	0.47%	11.30%	11.56%	**11.53%**	-0.03%	0.24%
Technology	14.33%	14.24%	**14.52%**	0.28%	0.20%	14.34%	13.95%	**13.77%**	-0.18%	-0.57%
Telecommunications	4.10%	4.08%	**4.25%**	0.16%	0.15%	3.65%	3.53%	**3.34%**	-0.19%	-0.31%
Transportation	1.47%	1.24%	**1.29%**	0.05%	-0.18%	2.03%	1.89%	**2.12%**	0.23%	0.09%
Utility	2.47%	2.31%	**2.18%**	-0.13%	-0.30%	2.97%	2.86%	**2.46%**	-0.41%	-0.51%

Source: J.P. Morgan.

Asset allocation

At the end of 4Q19, we estimate cash balances among loan funds were roughly 4.6%, up 0.6% from 4.0% at the end of 3Q, up 2.1% from 2.6% at the end of 4Q18, and comfortably above the 3.8% quarterly average over the last six years. In other assets, loan funds held 88.6% of their portfolio in leveraged loans (+0.2% q/q, -0.3% y/y), 5.4% in floating- and fixed-rate bonds (-0.9% q/q, -0.6% y/y), and 1.3% in other assets such as equities, credit derivatives, and structured products. **Meanwhile, high-yield funds' allocation to leveraged loans increased 31bp to 4.29% during 4Q19, after being basically unchanged across the year's first three quarters; loan allocations are up 22bp y/y.** At 4.29%, high-yield funds' exposure to bank loans is tied for its highest level since 2014 (it was also 4.29% in 3Q18). Notably, high-yield funds' loan exposure has averaged 3.61% since the start of 2010, but a higher 4.02% since the start of 2014.

Table 8: Loan fund asset allocations

	31-Dec-18	29-Mar-19	28-Jun-19	30-Sep-19	31-Dec-19	Q/Q change	Y/Y change
Leveraged Loans	88.9%	88.2%	88.9%	88.4%	88.6%	0.2%	-0.3%
Corporate bonds	6.0%	5.0%	5.2%	6.3%	5.4%	-0.9%	-0.6%
Cash	2.6%	4.3%	4.5%	4.0%	4.6%	0.6%	2.1%
Other	2.5%	2.5%	1.4%	1.3%	1.3%	0.0%	-1.2%

Source: J.P. Morgan.

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Appendix

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
8-Nov	84 Lumber Company	310.0	1st Lien TL (Cov-lite)	L+425bp	6-Nov-26	6.53%	1.00%	Y	B1/B+	Housing	Refinancing
7-Jun	ABC Financial Services	115.0	1st Lien TL (Cov-lite)	L+425bp	31-Dec-24	6.83%	1.00%	Y	B3/B-	Technology	Refinancing
19-Jun	AccentCare	355.0	1st Lien TL (Cov-lite)	L+500bp	16-Jun-26	7.94%	0.00%	Y	B3/B-	Healthcare	Acquisition
29-Jul	Access CIG	150.0	TLB (Cov-lite)	L+375bp	3-Mar-25	6.37%	0.00%	Y	B3/B	Services	Acquisition
4-Apr	Addison Group	310.0	TLB (Cov-lite)	L+500bp	2-Apr-26	8.10%	0.00%	Y	B2/B	Services	Refinancing
25-Apr	Adient Global Holdings	800.0	TLB (Cov-lite)	L+425bp	23-Apr-24	6.96%	0.00%	Y	B2/B+	Automotive	Refinancing
20-Sep	Advanced Computer Software	330.0	TLB (Cov-lite)	L+425bp	18-Sep-26	6.72%	0.00%	Y	B3/B-	Technology	Refinancing
18-Sep	Advanced Drainage Systems	700.0	TLB (Cov-lite)	L+225bp	16-Sep-26	4.48%	0.00%	Y	Ba2/BB-	Industrials	Acquisition
31-Jul	Advisor Group	1,025.0	TLB (Cov-lite)	L+500bp	30-Jul-26	7.75%	0.00%	Y	B2/B+	Financial	Acquisition
24-Oct	Aimbridge Acquisition Co., Inc.	425.0	TLB (Cov-lite)	L+375bp	7-Feb-26	5.99%	0.00%	Y	B2/B	Gaming/Leisure	Acquisition
17-Jan	Aimbridge Hospitality	370.0	1st Lien TL (Cov-lite)	L+375bp	15-Jan-26	6.78%	0.00%	Y	B2/B	Gaming/Leisure	Acquisition
13-Nov	Air Canada	592.0	TLB	L+175bp	12-Nov-23	3.66%	0.00%	N	Ba1/BB+	Transportation	Repricing
3-May	AL Midcoast Holdings	50.0	1st Lien TL	L+550bp	18-Aug-25	8.08%	0.00%	N	NR/B+	Transportation	Refinancing
7-Aug	Albertsons Companies	1,600.0	TLB (Cov-lite)	L+275bp	5-Aug-26	5.20%	0.75%	Y	B1/B+	Retail	Refinancing
7-Aug	Albertsons Companies	1,500.0	TLB (Cov-lite)	L+275bp	22-Nov-25	5.21%	0.75%	Y	B1/B+	Retail	Repricing
20-Sep	Aldevron	740.0	TLB (Cov-lite)	L+425bp	18-Sep-26	6.73%	1.00%	Y	B2/B	Technology	Acquisition
14-Feb	Alera Group	75.0	1st Lien TL (Cov-lite)	L+450bp	8-Jul-25	7.32%	0.00%	Y	B3/B	Financial	Acquisition
19-Nov	Alight Solutions	105.0	TLB (Cov-lite)	L+300bp	14-May-24	5.03%	0.00%	Y	B2/B	Technology	Acquisition
21-May	AlixPartners	1,521.0	TLB (Cov-lite)	L+275bp	4-Apr-24	5.46%	0.00%	Y	B2/B+	Financial	Refinancing
7-Oct	ALKU	218.0	1st Lien TL (Cov-lite)	L+550bp	2-Oct-26	8.04%	0.00%	Y	B2/B-	Services	Acquisition
29-Jan	Allegiant Travel Company	450.0	1st Lien TL	L+450bp	28-Jan-24	7.75%	0.00%	N	Ba3/BB-	Transportation	Refinancing
7-May	Alliant Holdings	530.0	1st Lien TL (Cov-lite)	L+325bp	5-May-25	6.08%	0.00%	Y	B3/B	Financial	Dividend
27-Jun	Allied Universal	2,020.0	1st Lien TL (Cov-lite)	L+425bp	25-Jun-26	7.09%	0.00%	Y	B3/B-	Services	Refinancing
27-Jun	Allied Universal	200.0	DD-TLB (Cov-lite)	L+425bp	25-Jun-26	7.09%	0.00%	Y	B3/B-	Services	Refinancing
27-Mar	Allison Transmission	648.0	TLB (Cov-lite)	L+200bp	25-Mar-26	4.72%	0.00%	Y	Ba2/NR	Industrials	Refinancing
8-Oct	Allison Transmission	646.0	TLB (Cov-lite)	L+175bp	1-Mar-26	3.96%	0.00%	Y	Ba2/NR	Industrials	Repricing
15-Nov	Allsup's	525.0	1st Lien TL	L+625bp	13-Nov-24	9.66%	1.00%	N	B2/B	Retail	Acquisition
12-Nov	Alterra Mountain Company	1,686.0	TLB (Cov-lite)	L+275bp	19-Jul-24	4.74%	0.00%	Y	B1/B	Gaming/Leisure	Repricing
12-Nov	Alterra Mountain Company	50.0	TLB (Cov-lite)	L+275bp	19-Jul-24	4.74%	0.00%	Y	B1/B	Gaming/Leisure	Repricing
20-Mar	AMC Entertainment	2,000.0	1st Lien TL (Cov-lite)	L+300bp	18-Mar-26	5.75%	0.00%	Y	B2/B	Gaming/Leisure	Refinancing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
7-Jun	AmericaLife Group	250.0	1st Lien TL (Cov-lite)	L+450bp	5-Jun-26	7.08%	0.00%	Y	B3/B	Financial	Dividend
7-Jun	AmericaLife Group	70.0	2nd lien TL (Cov-lite)	L+900bp	5-Jun-27	11.70%	0.00%	Y	B3/B	Financial	Dividend
7-Jun	AmericaLife Group	35.0	DD-1st Lien TL (Cov-lite)	L+450bp	6-Mar-20	7.08%	0.00%	Y	B3/B	Financial	Dividend
29-Oct	American Blds. & Contractors Sup.	1,483.0	1st Lien TL (Cov-lite)	L+200bp	8-Jan-27	4.06%	0.00%	Y	B1/BB	Housing	Refinancing
26-Jul	AmWINS	250.0	1st Lien TL (Cov-lite)	L+275bp	23-Jan-24	5.28%	1.00%	Y	B2/B+	Financial	General Corporate
12-Dec	AmWINS	250.0	1st Lien TL (Cov-lite)	L+275bp	10-Dec-24	4.88%	1.00%	Y	B1/B+	Financial	Dividend
1-Mar	Amynta Group	125.0	TLB (Cov-lite)	L+450bp	9-Mar-25	7.84%	0.00%	Y	B3/B-	Financial	Acquisition
22-Aug	Ancestry.com	950.0	1st Lien TL (Cov-lite)	L+425bp	20-Aug-26	6.87%	0.00%	Y	B2/B	Diversified Media	Dividend
12-Jul	Anchor Packaging	320.0	1st Lien TL (Cov-lite)	L+400bp	10-Jul-26	6.64%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
12-Jul	Anchor Packaging	70.0	DD-TLB (Cov-lite)	L+400bp	15-Jul-26	6.64%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
24-May	Anvil International	740.0	1st Lien TL (Cov-lite)	L+500bp	22-May-26	8.15%	0.00%	Y	B2/B	Industrials	Acquisition
24-May	Anvil International	100.0	2nd lien TL (Cov-lite)	L+900bp	22-May-27	12.77%	0.00%	Y	B2/B	Industrials	Acquisition
20-Aug	Apex Tool Group	874.5	1st Lien TL (Cov-lite)	L+550bp	18-Aug-24	7.78%	1.25%	Y	B3/B-	Industrials	Refinancing
27-Sep	APi Group	1,200.0	TLB (Cov-lite)	L+250bp	25-Sep-26	4.80%	0.00%	Y	Ba3/BB-	Housing	Acquisition
6-May	API Technologies Corp.	245.0	1st Lien TL (Cov-lite)	L+425bp	4-May-26	6.96%	0.00%	Y	B3/B	Technology	Acquisition
7-May	Apollo Commercial RE Finance	500.0	1st Lien TL	L+275bp	5-May-26	5.46%	0.00%	N	Ba3/BB-	Financial	General Corporate
12-Dec	Applied Systems	150.0	1st Lien TL (Cov-lite)	L+325bp	28-Sep-24	5.43%	1.00%	Y	B3/B-	Technology	Acquisition
12-Dec	Applied Systems	60.0	2nd Lien TL (Cov-lite)	L+700bp	28-Sep-25	8.95%	1.00%	Y	B3/B-	Technology	Acquisition
17-Apr	AppLovin	400.0	1st Lien TL (Cov-lite)	L+375bp	17-Aug-25	6.59%	0.00%	Y	B1/B+	Diversified Media	Acquisition
29-Mar	Aptean	350.0	1st Lien TL (Cov-lite)	L+425bp	27-Mar-26	6.97%	0.00%	Y	B3/B-	Technology	Acquisition
15-Aug	Aptean	75.0	1st Lien TL (Cov-lite)	L+425bp	25-Apr-26	6.78%	0.00%	Y	B3/B-	Technology	Acquisition
15-Aug	Aptean	37.0	2nd Lien TL (Cov-lite)	L+850bp	25-Apr-27	11.42%	0.00%	Y	B3/B-	Technology	Acquisition
10-Dec	Aramark Services	900.0	TLB (Cov-lite)	L+175bp	8-Dec-26	3.73%	0.00%	Y	Ba2/BB+	Food/Beverages	Refinancing
25-Sep	Argus Media	500.0	TLB (Cov-lite)	L+325bp	22-Sep-26	5.53%	0.00%	Y	B2/B+	Diversified Media	Dividend
30-Jul	ArisGlobal	240.0	1st Lien TL (Cov-lite)	L+500bp	28-Jul-26	7.75%	0.00%	Y	B3/B-	Technology	Acquisition
16-Oct	Arnott's	400.0	1st Lien TL (Cov-lite)	L+400bp	14-Oct-26	6.44%	0.00%	Y	B2/B	Food/Beverages	Acquisition
16-Aug	Ascend Performance	1,100.0	TLB (Cov-lite)	L+525bp	14-Aug-26	8.14%	1.00%	Y	B1/BB-	Chemicals	Dividend
26-Sep	Ascensus	245.0	1st Lien TL	L+475bp	24-Sep-26	7.14%	0.00%	N	B3/B-	Chemicals	Acquisition
25-Oct	Ascensus	160.0	TLB (Cov-lite)	L+425bp	29-Nov-22	6.68%	1.00%	Y	B3/B-	Financial	Acquisition
15-Mar	Ascensus	94.0	1st Lien TL (Cov-lite)	L+400bp	1-Dec-22	6.69%	1.00%	Y	B3/B-	Financial	Acquisition
15-Nov	ASGN	540.3	TLB (Cov-lite)	L+175bp	8-Apr-25	3.71%	0.00%	Y	Ba2/BB	Services	Repricing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
7-Feb	athenaHealth	3,660.0	1st Lien TL (Cov-lite)	L+450bp	5-Feb-26	7.73%	0.00%	Y	B3/B	Healthcare	Acquisition
16-Sep	Autodata	755.0	1st Lien TL (Cov-lite)	L+350bp	3-Jul-26	5.94%	0.00%	Y	B3/B-	Technology	Acquisition
22-May	Autodata	400.0	1st Lien TL (Cov-lite)	L+350bp	20-May-26	6.09%	0.00%	Y	B3/B-	Technology	Acquisition
26-Sep	Autokiniton	250.0	TLB (Cov-lite)	L+575bp	6-Jun-25	9.37%	0.00%	Y	B2/B+	Automotive	Acquisition
12-Jun	Avantor	810.0	TLB (Cov-lite)	L+300bp	18-Nov-24	5.43%	1.00%	Y	B1/B+	Healthcare	Repricing
4-Jun	Aveanna Healthcare	245.0	2nd Lien TL (Cov-lite)	L+875bp	2-Jun-27	12.23%	1.00%	Y	B3/B-	Healthcare	Acquisition
7-Mar	Avison Young	325.0	1st Lien TL (Cov-lite)	L+500bp	5-Mar-26	8.10%	0.00%	Y	B2/B-	Services	Acquisition
3-May	Avolon	2,580.0	TLB	L+175bp	18-Jan-25	4.36%	0.75%	N	Baa3/BBB-	Industrials	Repricing
25-Sep	Axiom Global	210.0	1st Lien TL (Cov-lite)	L+475bp	23-Sep-26	7.29%	0.00%	Y	NR/NR	Services	Acquisition
16-Sep	B&G Foods	450.0	TLB (Cov-lite)	L+250bp	14-Sep-26	4.78%	0.00%	Y	B1/B+	Food/Beverages	Refinancing
20-Dec	Bad Boy	205.0	TLB	L+575bp	18-Dec-25	8.11%	1.00%	N	NR/NR	Industrials	Acquisition
9-Apr	Barracuda Networks	205.0	1st Lien TL (Cov-lite)	L+325bp	9-Feb-25	6.01%	1.00%	Y	B2/B-	Technology	Refinancing
1-May	BCP Renaissance Parent LLC	65.0	TLB-2	L+350bp	1-Nov-24	6.82%	0.00%	N	B1/B+	Financial	Dividend
15-Feb	Belfor Holdings	585.0	TLB (Cov-lite)	L+400bp	13-Feb-26	6.81%	0.00%	Y	B1/B	Services	Acquisition
2-Jul	Belfor Holdings	75.0	TLB (Cov-lite)	L+400bp	30-Jun-26	6.54%	0.00%	Y	B1/B	Services	Acquisition
24-Oct	Belk	972.2	Extended TL (Cov-lite)	L+675bp	3-Jul-25	8.83%	1.00%	Y	B2/CCC	Retail	Refinancing
11-Oct	BellRing Brands	700.0	1st Lien TL	L+500bp	8-Oct-24	7.93%	1.00%	N	B2/B	Food/Beverages	Other
25-Oct	Belron Finance 2019 LLC	830.0	TLB (Cov-lite)	L+250bp	23-Oct-26	4.63%	0.00%	Y	Ba3/BB	Services	Dividend
17-May	Berry Global	4,250.0	1st Lien TL (Cov-lite)	L+250bp	15-May-26	5.09%	0.00%	Y	Ba3/BB+	Paper/Packaging	Acquisition
16-Dec	Berry Global	4,250.0	TLY (Cov-lite)	L+200bp	14-Jun-26	3.99%	0.00%	Y	Ba3/BB+	Paper/Packaging	Repricing
15-Oct	Berry Global	1,545.0	TLW (Cov-lite)	L+200bp	14-Oct-22	4.12%	0.00%	Y	Ba3/BB+	Paper/Packaging	Repricing
15-Oct	Berry Global	487.5	TLX (Cov-lite)	L+200bp	31-Jan-24	4.12%	0.00%	Y	Ba3/BB+	Paper/Packaging	Repricing
3-May	BGIS	455.0	1st Lien TL (Cov-lite)	L+375bp	1-May-26	6.39%	0.00%	Y	B3/B	Services	Acquisition
29-May	Big Ass Fans	110.0	1st Lien TL (Cov-lite)	L+375bp	28-Apr-24	6.33%	1.00%	Y	B2/B	Industrials	Dividend
4-Nov	Blackboard	500.0	TLB (Cov-lite)	L+600bp	12-Jul-24	10.04%	1.00%	Y	B3/B-	Technology	Refinancing
17-Apr	Blackboard Transact Holdings	260.0	1st Lien TL (Cov-lite)	L+475bp	15-Apr-26	7.72%	0.00%	Y	Caa1/B-	Services	Acquisition
7-Jun	Blackstone CQP Holdco	2,600.0	TLB	L+350bp	5-Jun-24	6.02%	0.00%	N	B1/B	Energy	Refinancing
16-Apr	Blackstone Mortgage Trust	500.0	1st Lien TL (Cov-lite)	L+250bp	14-Apr-26	5.15%	0.00%	Y	Ba2/BB-	Technology	General Corporate
18-Nov	Blackstone Mortgage Trust	499.0	TLB	L+225bp	14-May-26	4.16%	0.00%	N	Ba2/BB-	Financial	Repricing
18-Nov	Blackstone Mortgage Trust	250.0	TLB	L+225bp	14-May-26	4.19%	0.00%	N	Ba2/BB-	Financial	General Corporate
29-Mar	Blucora	125.0	TLB (Cov-lite)	L+300bp	28-Apr-24	5.72%	1.00%	Y	B1/BB	Financial	Acquisition

Source: J.P. Morgan.

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24-Jun	Bombardier Recreational Products	335.0	B-2 TL (Cov-lite)	L+250bp	22-Jun-25	5.27%	0.00%	Y	Ba3/BB	Consumer Products	Refinancing
22-Nov	Booz Allen Hamilton	389.0	TLB	L+175bp	20-Nov-26	3.76%	0.00%	N	Ba2/BB	Services	Repricing
15-Nov	Bowlero	105.0	TLB (Cov-lite)	L+350bp	20-Jun-24	5.65%	1.00%	Y	B2/B	Gaming/Leisure	General Corporate
19-Jul	Boyd Corp	125.0	1st Lien TL (Cov-lite)	L+475bp	17-Jul-26	8.28%	0.00%	Y	B3/B-	Industrials	Acquisition
12-Feb	Brightspring Health Services	1,650.0	1st Lien TL (Cov-lite)	L+450bp	10-Feb-26	8.69%	0.00%	Y	B2/B	Healthcare	Acquisition
12-Feb	Brightspring Health Services	150.0	DD-1st Lien TL (Cov-lite)	L+450bp	10-Feb-26	8.69%	0.00%	Y	B2/B	Healthcare	Acquisition
25-Jul	BroadStreet Partners	135.0	TLB (Cov-lite)	L+325bp	10-Nov-23	5.78%	1.00%	Y	B2/B	Financial	Acquisition
12-Feb	Brooks Automation	349.1	TLB (Cov-lite)	L+300bp	12-Oct-24	5.94%	0.00%	Y	B1/BB-	Technology	Acquisition
16-Oct	Buckeye Partners	2,250.0	1st Lien TL (Cov-lite)	L+275bp	14-Oct-26	4.99%	0.00%	Y	Ba3/BB	Energy	Acquisition
17-Dec	Cabot Microelectronics	957.0	TLB (Cov-lite)	L+200bp	8-Nov-25	3.94%	0.00%	Y	Ba2/BB	Technology	Repricing
24-Jan	Caliber Collision	1,850.0	1st Lien TL (Cov-lite)	L+350bp	22-Jan-26	6.53%	0.00%	Y	B2/B	Automotive	Acquisition
17-Dec	Calpine Corp	1,532.0	TLB (Cov-lite)	L+225bp	21-Jan-24	4.20%	0.00%	Y	Ba3/B+	Utility	Repricing
22-Mar	Calpine Corp	950.0	TLB-9 (Cov-lite)	L+275bp	20-Mar-26	5.61%	0.00%	Y	Ba3/B+	Utility	Refinancing
12-Dec	Calpine Corp	947.6	TLB (Cov-lite)	L+225bp	15-Apr-26	4.20%	0.00%	Y	Ba3/B+	Utility	Repricing
2-Aug	Calpine Corp	750.0	TLB-10 (Cov-lite)	L+250bp	31-Jul-26	4.95%	0.00%	Y	B2/B+	Utility	Refinancing
19-Nov	Cambium Learning Group	295.0	TLB (Cov-lite)	L+450bp	23-Dec-25	7.46%	0.00%	Y	B3/B-	Services	Acquisition
15-Jan	Cambium Learning Group	130.0	2nd lien TL (Cov-lite)	L+850bp	13-Jan-27	12.80%	0.00%	Y	B3/B-	Services	Acquisition
23-Nov	Cambrex	710.0	1st Lien TL (Cov-lite)	L+500bp	20-Nov-26	7.49%	1.00%	Y	B3/B	Healthcare	Acquisition
22-Nov	Cambrex	175.0	2nd Lien TL (Cov-lite)	L+900bp	20-Nov-27	11.78%	1.00%	Y	B3/B	Healthcare	Acquisition
18-Dec	Canister International Group	445.0	1st Lien TL (Cov-lite)	L+474bp	16-Dec-26	7.02%	0.00%	Y	B2/B	Industrials	Acquisition
22-Mar	Carbonite	550.0	TLB (Cov-lite)	L+375bp	20-Mar-26	6.61%	0.00%	Y	B2/B	Technology	Acquisition
8-Feb	Carroll County Energy	460.0	TLB	L+350bp	6-Feb-26	6.45%	0.00%	N	NR/NR	Utility	Dividend
4-Apr	Carrols Restaurant Group	425.0	TLB (Cov-lite)	L+325bp	2-Apr-26	5.98%	0.00%	Y	B2/B	Food/Beverages	Acquisition
16-Jan	Cast & Crew Entertainment	765.0	1st Lien TL	L+400bp	14-Jan-26	7.03%	0.00%	N	B3/B	Services	Acquisition
9-May	Catalent Pharma Solutions	950.0	1st Lien TL (Cov-lite)	L+225bp	7-May-26	4.89%	0.00%	Y	B1/BB-	Healthcare	Acquisition
2-Oct	CDW LLC	1,446.0	TLB (Cov-lite)	L+175bp	25-Aug-26	3.87%	0.00%	Y	Ba1/BB+	Technology	Refinancing
15-Aug	CEC Entertainment	760.0	1st Lien TL (Cov-lite)	L+650bp	13-Aug-26	9.94%	1.00%	Y	B3/B-	Food/Beverages	Refinancing
30-Sep	Cerence	270.0	1st Lien TL	L+600bp	25-Sep-24	10.03%	1.00%	N	B2/B	Technology	Other
23-May	Cetera Financial Group	105.0	1st Lien TL (Cov-lite)	L+425bp	6-Oct-25	7.13%	0.00%	Y	B3/B	Financial	Acquisition
22-Feb	CEVA Logistics	475.0	TLB (Cov-lite)	L+500bp	17-Aug-25	8.41%	0.00%	Y	B1/BB-	Services	Refinancing
21-Oct	Charter Communications	3,804.0	TLB	L+175bp	5-Feb-27	3.85%	0.00%	N	Ba2/BB+	Cable/Satellite	Repricing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
21-Oct	Charter Communications	2,434.0	TLB	L+175bp	19-Apr-25	3.81%	0.00%	N	Ba2/BB+	Cable/Satellite	Repricing
3-May	Charter NEX Films	675.0	1st Lien TL (Cov-lite)	L+350bp	26-May-25	6.21%	0.00%	Y	B3/B	Industrials	Acquisition
10-Dec	Chesapeake Energy	1,500.0	1st Lien TL (Cov-lite)	L+800bp	7-Jun-24	10.90%	1.00%	Y	Caa1/CCC+	Energy	Refinancing
27-Jun	CHG Healthcare Services	50.0	1st Lien TL (Cov-lite)	L+300bp	15-Jun-23	5.57%	1.00%	Y	B2/B	Healthcare	General Corporate
14-Mar	Chromaflo Technologies	60.0	1st Lien TL (Cov-lite)	L+425bp	23-Nov-23	6.82%	1.00%	Y	B3/B-	Chemicals	Refinancing
20-Sep	Cineworld Group	650.0	LTB (Cov-Lite)	L+250bp	18-Sep-26	4.82%	0.00%	N	B1/BB-	Gaming/Leisure	Refinancing
2-Jul	Circa Resort & Casino	450.0	1st Lien TL	L+800bp	30-Jun-25	11.46%	1.50%	N	B3/B-	Gaming/Leisure	General Corporate
24-Jun	Citadel Securities	400.0	1st Lien TL	L+350bp	28-Feb-26	6.09%	0.00%	N	Ba1/BBB-	Financial	General Corporate
24-Jul	CITGO Holdings	500.0	1st Lien TL (Cov-lite)	L+700bp	23-Jul-23	10.17%	1.00%	Y	Caa1/B-	Energy	Refinancing
28-Mar	Citgo Petroleum	1,200.0	1st Lien TL	L+500bp	15-Nov-22	7.86%	1.00%	N	B3/B-	Energy	General Corporate
7-Aug	CityMD	900.0	1st Lien TL (Cov-lite)	L+450bp	5-Aug-26	7.18%	1.00%	Y	B2/B-	Healthcare	Acquisition
5-Feb	Civitas Solutions	805.0	TLB (Cov-lite)	L+425bp	3-Feb-26	7.23%	0.00%	Y	B2/B	Healthcare	Acquisition
5-Feb	Civitas Solutions	50.0	TLC (Cov-lite)	L+425bp	3-Feb-26	7.23%	0.00%	Y	B2/B	Healthcare	Acquisition
28-Oct	Clarivate Analytics	900.0	TLB (Cov-lite)	L+325bp	26-Oct-26	5.41%	0.00%	Y	B2/B	Services	Refinancing
9-Aug	Clear Channel Outdoor Holdings	2,000.0	1st Lien TL (Cov-lite)	L+350bp	7-Aug-26	5.99%	0.00%	Y	B3/B-	Broadcasting	Refinancing
26-Jul	Clearwater Paper	300.0	1st Lien TL (Cov-lite)	L+325bp	23-Jul-26	5.78%	0.00%	Y	Ba2/BB-	Paper/Packaging	Refinancing
25-Sep	CoAdvantage	325.0	1st Lien TL (Cov-lite)	L+500bp	24-Sep-25	7.54%	1.00%	Y	B3/B-	Services	Acquisition
8-Feb	Cole Haan	290.0	TLB (Cov-lite)	L+550bp	6-Feb-25	8.51%	0.00%	Y	B2/B	Consumer Products	Refinancing
29-Oct	Cole-Parmer	770.0	1st Lien TL (Cov-lite)	L+425bp	27-Oct-26	6.48%	0.00%	Y	B3/B	Industrials	Acquisition
7-Feb	CommScope	3,200.0	1st Lien TL (Cov-lite)	L+325bp	5-Feb-26	6.23%	0.00%	Y	Ba3/BB-	Technology	Acquisition
13-Jun	Compania Espanola de Petroleos	601.4	1st Lien TL	L+475bp	11-Jun-26	7.43%	0.00%	N	NR/BB-	Energy	Acquisition
5-Nov	Compassus	400.0	TLB (Cov-lite)	L+500bp	2-Nov-26	7.47%	1.00%	Y	B3/B	Healthcare	Acquisition
11-Jun	Compuware	230.0	1st Lien TL (Cov-lite)	L+400bp	11-Aug-25	6.58%	0.00%	Y	B2/B	Technology	Dividend
18-Sep	Concentra	100.0	TLB (Cov-lite)	L+250bp	4-Jul-22	4.90%	0.00%	Y	B1/B+	Healthcare	Refinancing
21-Mar	Concrete Pumping Holdings	40.0	1st Lien TL (Cov-lite)	L+600bp	15-Dec-25	9.23%	0.00%	Y	B2/B	Industrials	Acquisition
21-Jun	Confluent Health	200.0	TLB (Cov-lite)	L+500bp	19-Jun-26	7.94%	0.00%	Y	B3/B-	Healthcare	Dividend
26-Mar	CONSOL Energy	275.0	TLB (Cov-lite)	L+450bp	22-Sep-24	7.24%	0.00%	Y	B1/B+	Metals/Mining	Refinancing
28-Jun	Consolidated Container Company	250.0	TLB (Cov-lite)	L+350bp	26-Jun-26	6.16%	0.00%	Y	B2/B+	Paper/Packaging	Acquisition
18-Jul	Consolidated Precision Products	192.0	TLB (Cov-lite)	L+375bp	4-May-25	6.34%	1.00%	Y	B3/B	Industrials	Acquisition
26-Apr	Conterra Ultra Broadband	250.0	1st Lien TL (Cov-lite)	L+450bp	24-Apr-26	7.21%	0.00%	Y	B3/B-	Telecom	Refinancing
26-Apr	Conterra Ultra Broadband	65.0	2nd Lien TL (Cov-lite)	L+800bp	26-Apr-27	11.34%	1.00%	Y	Caa2/CCC	Services	Refinancing

Source: J.P. Morgan.

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
7-Mar	ConvergeOne	960.0	1st Lien TL (Cov-lite)	L+500bp	5-Mar-27	8.73%	0.00%	Y	B3/B-	Telecom	Acquisition
7-Mar	ConvergeOne	275.0	2nd Lien TL (Cov-lite)	L+850bp	5-Mar-26	12.94%	0.00%	Y	B3/B-	Telecom	Acquisition
20-Nov	CoolSys	235.0	1st Lien TL (Cov-lite)	L+600bp	15-Nov-26	8.36%	1.00%	Y	B3/B-	Housing	Refinancing
29-Oct	Cooper's Hawk	200.0	TLB	L+650bp	27-Oct-26	9.45%	0.00%	N	B3/B-	Food/Beverages	Refinancing
4-Nov	Cooper's Hawk Int. Holdings	200.0	1st Lien TL	L+650bp	28-Oct-26	9.75%	0.00%	N	B3/B-	Food/Beverages	Acquisition
22-May	Core & Main LP	225.0	TLB (Cov-lite)	L+300bp	22-Jul-24	5.59%	1.00%	Y	B2/B+	Housing	Acquisition
12-Dec	CoreCivic	250.0	TLB	L+450bp	10-Dec-24	7.85%	1.00%	N	Ba1/BB	Housing	Refinancing
27-Jun	Corel Corp.	485.0	1st Lien TL (Cov-lite)	L+500bp	26-Jun-26	8.84%	0.00%	Y	B3/B-	Technology	Acquisition
19-Jun	Covenant Surgical Partners	250.0	1st Lien TL (Cov-lite)	L+400bp	18-Jun-21	6.88%	0.00%	Y	B3/B-	Healthcare	Refinancing
19-Jun	Covenant Surgical Partners	50.0	DD-TLB (Cov-lite)	L+400bp	17-Jun-26	6.88%	0.00%	Y	B3/B-	Healthcare	Refinancing
12-Dec	Cox Media Group	2,025.0	TLB (Cov-lite)	L+425bp	10-Dec-26	6.27%	0.00%	Y	B2/B	Diversified Media	Acquisition
2-Oct	CPI International	195.0	1st Lien TL (Cov-lite)	L+475bp	19-Jul-24	7.31%	1.00%	Y	B3/B	Industrials	Acquisition
22-Nov	Creative Artists Agency	1,150.0	TLB (Cov-lite)	L+375bp	20-Nov-26	5.92%	0.00%	Y	B2/B+	Diversified Media	Refinancing
27-Sep	CSC Holdings	3,000.0	TLB-5 (Cov-lite)	L+250bp	2-May-27	4.71%	0.00%	Y	B1/BB-	Cable/Satellite	Refinancing
7-Feb	CSC Holdings	1,000.0	TLB-4 (Cov-lite)	L+300bp	7-May-27	5.98%	0.00%	Y	B1/B+	Cable/Satellite	Refinancing
2-Oct	Culligan	200.0	TLB (Cov-lite)	L+425bp	13-Dec-23	8.06%	1.00%	Y	B3/B-	Diversified Media	Acquisition
2-Jul	Culligan	70.0	1st Lien TLB (Cov-lite)	L+425bp	30-Dec-23	7.54%	1.00%	Y	B3/B	Services	Refinancing
18-Sep	Cumulus Media	525.0	B term loan	L+375bp	17-Mar-26	6.09%	1.00%	N	B2/B-	Broadcasting	Refinancing
26-Jun	Curium Pharma	495.0	TLB (Cov-lite)	L+400bp	25-Jun-26	6.52%	0.00%	Y	B2/B	Retail	Refinancing
26-Jun	Cypress Performance Group	134.0	1st Lien TL (Cov-lite)	L+350bp	23-Dec-24	6.30%	1.00%	Y	B2/B	Chemicals	Refinancing
29-Mar	Datto	550.0	1st Lien TL (Cov-lite)	L+425bp	27-Mar-26	6.97%	0.00%	Y	B2/B	Technology	Refinancing
8-Aug	DaVita	2,750.0	TLB	L+225bp	6-Aug-26	4.68%	0.00%	N	Ba2/BB	Healthcare	Refinancing
1-Apr	Delachaux	200.0	TLB (Cov-lite)	L+450bp	30-Mar-26	7.35%	0.00%	Y	B2/B+	Industrials	Refinancing
17-May	Delek U.S. Holdings	250.0	1st Lien TL (Cov-lite)	L+225bp	24-Mar-25	4.96%	0.00%	Y	Ba3/BB	Energy	Refinancing
11-Oct	Delek U.S. Holdings	150.0	TLB (Cov-lite)	L+225bp	3-Mar-25	4.69%	0.00%	Y	Ba3/BB	Energy	General Corporate
12-Sep	Dell Technologies	4,750.0	TLB (Cov-lite)	L+200bp	10-Sep-25	4.21%	0.75%	Y	Ba1/BB+	Technology	Refinancing
8-Mar	Dental Corporation of Canada	127.0	1st Lien TL	L+375bp	6-Jun-25	7.15%	0.00%	N	B3/B-	Healthcare	Acquisition
1-Mar	Dental Corporation of Canada	50.0	2nd Lien TL (Cov-lite)	L+750bp	16-Jun-26	10.54%	0.00%	Y	B3/B-	Healthcare	Acquisition
18-Jul	Diamond Sports Group	3,300.0	1st Lien TL (Cov-lite)	L+325bp	16-Jul-26	5.78%	0.00%	Y	Ba3/BB-	Broadcasting	Acquisition
8-Aug	DigiCert	1,650.0	1st Lien TL (Cov-lite)	L+400bp	6-Aug-26	6.47%	0.00%	Y	B3/B-	Technology	Acquisition
14-May	Digital Room	280.0	1st Lien TL	L+500bp	12-May-26	7.90%	0.00%	N	B3/B-	Technology	Dividend

Source: J.P. Morgan.

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
14-May	Digital Room	85.0	2nd Lien TL	L+900bp	12-May-27	12.03%	0.00%	N	B3/B-	Technology	Dividend
12-Apr	Direct ChassisLink	825.0	2nd lien TL (Cov-lite)	L+825bp	10-Apr-26	12.09%	0.00%	Y	B2/B+	Transportation	Acquisition
29-Jan	DiscoverOrg	865.0	1st Lien TL (Cov-lite)	L+450bp	27-Jan-26	7.50%	0.00%	Y	NR/NR	Technology	Acquisition
29-Jan	DiscoverOrg	370.0	2nd lien TL (Cov-lite)	L+850bp	27-Jan-27	11.63%	0.00%	Y	NR/NR	Technology	Acquisition
12-Jun	Distribution International	206.0	1st Lien TL (Cov-lite)	L+575bp	23-Dec-23	8.18%	1.00%	Y	Caa1/CCC+	Housing	Refinancing
22-Nov	Doosan Bobcat	660.0	TLB (Cov-lite)	L+175bp	21-May-24	3.78%	0.00%	Y	Ba3/BB	Industrials	Repricing
26-Nov	DRW Holdings	300.0	1st Lien TL	L+425bp	24-Nov-26	6.50%	0.00%	N	B1/BB-	Financial	General Corporate
9-Oct	DuBois Chemicals	520.0	1st Lien TL (Cov-lite)	L+450bp	6-Oct-26	7.29%	0.00%	Y	B3/B-	Chemicals	Acquisition
9-Oct	DuBois Chemicals	145.0	2nd Lien TL (Cov-lite)	L+850bp	6-Oct-27	11.58%	0.00%	Y	B3/B-	Chemicals	Acquisition
9-Oct	DuBois Chemicals	110.0	DD-TLB (Cov-lite)	L+450bp	7-Apr-21	7.29%	0.00%	Y	B3/B-	Chemicals	Acquisition
19-Feb	Duff & Phelps	280.0	TLB (Cov-lite)	L+400bp	25-Feb-25	6.77%	1.00%	Y	B3/B	Financial	Acquisition
1-Feb	Dun & Bradstreet	2,530.0	1st Lien TL (Cov-lite)	L+500bp	30-Jan-26	8.24%	0.00%	Y	B3/B-	Services	Acquisition
16-Jan	Duravant	160.0	TLB (Cov-lite)	L+425bp	2-Aug-24	7.53%	0.00%	Y	B3/B-	Paper/Packaging	Acquisition
15-Aug	DynCorp International	360.0	TLB	L+600bp	13-Aug-25	9.28%	0.00%	N	B1/B+	Industrials	Refinancing
5-Apr	E.W. Scripps	765.0	TLB (Cov-lite)	L+275bp	3-Apr-26	5.48%	0.00%	Y	B1/B+	Broadcasting	Acquisition
11-Dec	E.W. Scripps	761.0	TLB (Cov-lite)	L+250bp	4-May-26	4.48%	0.00%	Y	B1/B	Broadcasting	Repricing
22-May	Eastern Power	150.0	TLB	L+375bp	22-Sep-23	6.40%	0.00%	N	NR/NR	Utility	Dividend
24-Sep	ECi Software Solutions	96.0	1st Lien TL (Cov-lite)	L+425bp	22-Sep-24	6.66%	1.00%	Y	B3/B-	Technology	Acquisition
22-Mar	ECi Software Solutions	50.0	1st Lien TL (Cov-lite)	L+425bp	5-Sep-24	7.11%	1.00%	Y	B3/B-	Technology	Refinancing
24-Sep	ECi Software Solutions	28.0	2nd Lien TL (Cov-lite)	L+800bp	22-Sep-25	10.76%	1.00%	Y	B3/B-	Technology	Acquisition
15-May	Edgewater Generation	250.0	1st Lien TL (Cov-lite)	L+375bp	18-Dec-25	6.39%	0.00%	Y	NR/NR	Utility	Acquisition
25-Jan	Edgewater Generation	100.0	TL (Cov-lite)	L+375bp	24-Nov-25	6.90%	0.00%	Y	NR/NR	Utility	Acquisition
23-Sep	Edgewell Personal Care	600.0	TLB (Cov-lite)	L+300bp	18-Sep-26	5.44%	0.00%	Y	B1/BB-	Consumer Products	Acquisition
31-Jan	Edgewood Partners Ins. Center	295.0	1st Lien TL (Cov-lite)	L+425bp	31-Aug-24	7.24%	1.00%	Y	NR/NR	Financial	Acquisition
1-Nov	Edgewood Partners Ins. Center	150.0	1st Lien TL	L+425bp	23-Sep-24	6.66%	1.00%	N	NR/NR	Financial	Acquisition
31-Jan	Edgewood Partners Ins. Center	115.0	DD-1st Lien TL (Cov-lite)	L+425bp	1-Aug-19	7.24%	1.00%	Y	NR/NR	Financial	Acquisition
2-Jul	Electronics for Imaging	875.0	1st Lien TL (Cov-lite)	L+500bp	30-Jun-26	8.68%	0.00%	Y	B3/B-	Technology	Acquisition
2-Jul	Electronics for Imaging	225.0	2nd Lien TL (Cov-lite)	L+900bp	30-Jun-27	13.02%	0.00%	Y	B3/B-	Technology	Acquisition
26-Nov	Element Solutions/MacDermid Inc.	744.4	TLB (Cov-lite)	L+200bp	29-Dec-25	3.97%	0.00%	Y	Ba3/BB-	Chemicals	Repricing
5-Apr	Ellie Mae	965.0	1st Lien TL (Cov-lite)	L+400bp	3-Apr-26	6.73%	0.00%	Y	B3/B-	Financial	Acquisition
28-Oct	Ellie Mae	350.0	1st Lien TL (Cov-lite)	L+400bp	23-Apr-26	6.29%	0.00%	Y	B3/B-	Financial	Acquisition

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
4-Dec	EMG Utica	172.5	1st Lien TL (Cov-lite)	L+425bp	3-Dec-26	6.59%	1.00%	Y	B1/B	Energy	Refinancing
24-Jul	Ensemble Health Partners	672.0	1st Lien TL (Cov-lite)	L+375bp	22-Jul-26	6.30%	0.00%	Y	B2/B	Healthcare	Acquisition
2-Apr	Enstor Mercury Holdings	255.0	TLB	L+450bp	31-Mar-26	7.35%	1.00%	N	NR/NR	Energy	Acquisition
12-Feb	Entegris	400.0	TLB (Cov-lite)	L+200bp	10-Nov-25	4.94%	0.00%	Y	Ba1/BB+	Technology	Refinancing
11-Dec	Entercom Media	770.0	1st Lien TL (Cov-lite)	L+250bp	8-Dec-25	4.46%	0.00%	Y	B1/B+	Broadcasting	Refinancing
21-Feb	EPIC Crude Services	1,000.0	TLB	L+500bp	19-Feb-26	8.16%	0.00%	N	B3/B+	Energy	General Corporate
21-Nov	Epic Y-Grade Services	150.0	TLB	L+600bp	26-Jun-25	9.03%	1.00%	N	B3/B	Energy	General Corporate
5-Mar	Equinox Holdings	200.0	TLB (Cov-lite)	L+300bp	1-Apr-24	5.86%	0.00%	Y	B2/B	Gaming/Leisure	General Corporate
27-Jun	ERM	500.0	1st Lien TL (Cov-lite)	L+375bp	25-Jun-26	6.37%	0.00%	Y	B2/B	Services	Refinancing
27-Jun	ERM	175.0	2nd Lien TL (Cov-lite)	L+775bp	25-Jun-27	6.37%	0.00%	Y	B2/B	Services	Refinancing
12-Sep	ESH Hospitality	631.0	TLB (Cov-lite)	L+200bp	10-Sep-26	4.23%	0.00%	Y	Ba3/BB-	Gaming/Leisure	Refinancing
12-Dec	Everi Payments	751.5	1st Lien TL	L+275bp	5-May-24	4.74%	1.00%	N	B1/B+	Gaming/Leisure	Repricing
3-Oct	Excel Fitness Holdings	260.0	1st Lien TL (Cov-lite)	L+525bp	1-Oct-25	7.81%	1.00%	Y	B3/B	Gaming/Leisure	Refinancing
13-May	FirstLight Fiber	80.0	1st Lien TL (Cov-lite)	L+350bp	23-Jul-25	6.38%	0.00%	Y	B3/B-	Telecom	Acquisition
13-May	FirstLight Fiber	10.0	2nd Lien TL (Cov-lite)	L+750bp	23-Jul-26	10.45%	0.00%	Y	B3/B-	Telecom	Acquisition
8-Nov	FleetCor Tech. Operating Company	343.0	TLB (Cov-lite)	L+175bp	24-Aug-24	3.74%	0.00%	Y	Ba1/BB+	Services	Repricing
28-Jan	FleetPride	620.0	1st Lien TL (Cov-lite)	L+450bp	26-Jan-26	7.75%	0.00%	Y	B3/B-	Transportation	Acquisition
30-Apr	Flexera Software	235.0	1st Lien TL (Cov-lite)	L+350bp	21-Feb-25	6.21%	0.00%	Y	B2/B-	Technology	Dividend
30-Apr	Flexera Software	25.0	2nd Lien TL (Cov-lite)	L+725bp	21-Feb-26	10.08%	0.00%	Y	B2/B-	Technology	Dividend
29-Oct	Flexitallic	200.0	1st Lien TL	L+650bp	27-Oct-26	9.37%	1.00%	N	B3/B-	Chemicals	Refinancing
19-Nov	Fly Leasing	385.4	TLB	L+175bp	30-Jul-25	3.76%	0.00%	N	Ba3/BB	Transportation	Repricing
24-Jul	Focus Financial	350.0	TLB (Cov-lite)	L+250bp	22-Jul-24	4.98%	0.00%	Y	Ba3/BB-	Financial	Refinancing
15-Nov	Forest City Enterprises	1,241.0	TLB (Cov-lite)	L+350bp	13-Nov-25	5.63%	0.00%	Y	B1/B+	Financial	Repricing
18-Sep	Fossil	200.0	1st Lien TL	L+650bp	16-Sep-24	10.16%	1.50%	N	Ba3/BB-	Industrials	Refinancing
15-Aug	Franklin Energy Group	325.0	1st Lien TL (Cov-lite)	L+400bp	13-Aug-26	6.55%	0.00%	Y	B3/B-	Technology	Acquisition
13-Dec	Franklin Square Holdings	520.0	TLB (Cov-lite)	L+225bp	18-Jul-25	4.26%	0.00%	Y	Ba1/BB	Financial	Repricing
24-Oct	Garda World Security	1,438.0	TLB (Cov-lite)	L+475bp	22-Oct-26	7.19%	0.00%	Y	B3/B	Services	Acquisition
17-Jul	Garda World Security	194.5	1st Lien TL (Cov-lite)	L+350bp	7-Jun-24	7.78%	1.00%	Y	B3/B	Services	Acquisition
30-Jul	GEMS	750.0	1st Lien TL (Cov-lite)	L+500bp	28-Jul-26	7.75%	1.00%	Y	B2/B	Services	Refinancing
12-Dec	Generac Power Systems	830.0	TLB (Cov-lite)	L+175bp	9-Dec-26	3.71%	0.00%	Y	Ba2/BB	Industrials	Refinancing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
6-Nov	Genesee & Wyoming	2,550.0	TLB (Cov-lite)	L+200bp	4-Nov-26	4.15%	0.00%	Y	Ba2/BB+	Transportation	Acquisition
13-Feb	Getty Images	1,040.0	1st Lien TL (Cov-lite)	L+450bp	11-Feb-26	7.56%	0.00%	Y	B3/B-	Diversified Media	Refinancing
24-May	GlobalFoundries	525.0	1st Lien TL (Cov-lite)	L+400bp	22-May-26	6.77%	0.00%	Y	NR/NR	Technology	Refinancing
11-Dec	GlobalLogic Holdings	40.0	TLB (Cov-lite)	L+325bp	19-Aug-25	5.24%	0.00%	Y	B2/B+	Technology	Refinancing
3-May	GlobalTranz Enterprises	310.0	TLB (Cov-lite)	L+500bp	1-May-26	8.08%	0.00%	Y	B3/B-	Transportation	Acquisition
3-May	GlobalTranz Enterprises	80.0	DD-TLB (Cov-lite)	L+500bp	1-May-26	8.08%	0.00%	Y	B3/B-	Transportation	Acquisition
2-Oct	Go Daddy	1,839.0	TLB (Cov-lite)	L+175bp	23-Feb-24	4.00%	0.00%	Y	Ba2/BB	Technology	Repricing
11-Oct	Golden Nugget	300.0	TLB (Cov-lite)	L+275bp	10-Oct-23	4.97%	0.75%	Y	B2/B	Food/Beverages	Acquisition
24-Jun	Golden State Medical Supply	300.0	1st Lien TL (Cov-lite)	L+475bp	19-Jun-26	7.68%	0.00%	Y	B3/B-	Healthcare	Acquisition
24-Jun	Golden State Medical Supply	130.0	2nd lien TL (Cov-lite)	L+825bp	19-Jun-27	11.54%	0.00%	Y	B3/B-	Healthcare	Acquisition
25-Oct	GoodRx	155.0	TLB (Cov-lite)	L+300bp	23-Oct-25	5.15%	0.00%	Y	B2/B	Healthcare	Refinancing
1-Nov	Granite Generation, LLC	1,400.0	1st Lien TL (Cov-lite)	L+375bp	30-Oct-26	6.05%	1.00%	Y	Ba3/B+	Utility	Dividend
5-Apr	Greenhill & Co.	375.0	TLB (Cov-lite)	L+325bp	3-Apr-24	5.98%	0.00%	Y	Ba2/BB	Financial	Refinancing
8-Nov	Grifols	2,500.0	TLB (Cov-lite)	L+200bp	6-Nov-27	4.04%	0.00%	Y	Ba3/BB	Healthcare	Refinancing
19-Jul	Grocery Outlet	475.2	1st Lien TL (Cov-lite)	L+350bp	3-Nov-25	5.94%	0.00%	Y	B2/B	Retail	Repricing
7-Oct	Guidehouse	640.0	1st Lien TL (Cov-lite)	L+450bp	17-Jun-25	7.03%	0.00%	Y	B2/B-	Services	Acquisition
7-Oct	Guidehouse	200.0	2nd Lien TL (Cov-lite)	L+850bp	5-Apr-26	11.41%	0.00%	Y	B2/B-	Services	Acquisition
7-Nov	Hard Rock Northern Indiana	345.0	1st Lien TL	L+900bp	5-Nov-25	12.42%	2.00%	N	B3/B-	Gaming/Leisure	General Corporate
7-Nov	Hard Rock Northern Indiana	25.0	DD-TLB (Cov-lite)	L+900bp	6-Nov-21	12.42%	2.00%	Y	B3/B-	Gaming/Leisure	General Corporate
10-May	Hargray Communications	50.0	1st Lien TL (Cov-lite)	L+275bp	8-May-24	5.59%	1.00%	Y	B2/B+	Telecom	Refinancing
4-Oct	HCA	1,478.0	TLB	L+175bp	25-Feb-25	3.96%	0.00%	N	Ba1/BB+	Healthcare	Repricing
19-Nov	HCA	1,148.0	TLB	L+175bp	5-Mar-26	3.71%	0.00%	N	Ba1/BB+	Healthcare	Refinancing
17-Jun	Heartland Dental	150.0	1st Lien TL (Cov-lite)	L+450bp	1-Apr-25	7.56%	0.00%	Y	B3/B-	Healthcare	General Corporate
3-Oct	Helios Software Company	655.0	TLB (Cov-lite)	L+425bp	30-Sep-25	6.75%	0.00%	Y	B2/B	Technology	Refinancing
14-Nov	HelpSystems	725.0	1st Lien TL (Cov-lite)	L+475bp	12-Nov-26	7.06%	1.00%	Y	B3/B-	Technology	Acquisition
12-Dec	Herbalife Nutrition	742.5	1st Lien TL (Cov-lite)	L+275bp	22-Aug-25	4.74%	0.00%	Y	Ba3/BB-	Food/Beverages	Repricing
8-Jul	Heritage Power	520.0	1st Lien TL	L+600bp	6-Jul-26	7.59%	1.00%	N	B1/B+	Utility	Refinancing
27-Jun	Hexion	725.0	1st Lien TL	L+350bp	25-Jun-26	6.30%	0.00%	N	Ba3/B	Chemicals	Refinancing
12-Apr	Hexion	350.0	DIP-TL	L+275bp	10-Oct-20	5.40%	0.00%	N	NR/NR	Chemicals	DIP/Exit
15-Oct	High Liner Foods	300.0	TLB	L+425bp	13-Oct-26	6.76%	0.00%	N	B2/B	Food/Beverages	Refinancing
18-Jun	Hilton Worldwide Holdings	2,619.0	TLB (Cov-lite)	L+175bp	16-Jun-26	4.34%	0.00%	Y	Ba1/BB+	Gaming/Leisure	Refinancing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
17-May	Horizon Therapeutics	518.0	1st Lien TL (Cov-lite)	L+250bp	15-May-26	5.05%	0.00%	Y	Ba3/BB-	Healthcare	Repricing
16-Dec	Horizon Therapeutics	418.0	1st Lien TL (Cov-lite)	L+225bp	9-May-26	4.22%	0.00%	Y	Ba3/BB-	Healthcare	Repricing
8-Mar	Hornblower	320.0	TL (cov-lite)	L+450bp	8-Apr-25	7.23%	1.00%	Y	B2/B	Gaming/Leisure	Acquisition
23-Sep	Hostess	979.0	TLB (Cov-lite)	L+225bp	12-Aug-25	4.56%	0.75%	Y	B1/B+	Food/Beverages	Refinancing
12-Dec	Hostess Brands	140.0	TLB (Cov-lite)	L+225bp	22-Aug-25	4.25%	0.75%	Y	B1/B+	Food/Beverages	Acquisition
19-Nov	Houghton Mifflin Harcourt	380.0	TLB (Cov-lite)	L+625bp	17-Nov-24	9.04%	1.00%	Y	B3/B-	Diversified Media	Refinancing
25-Sep	Howden	900.0	TLB (Cov-lite)	L+525bp	23-Sep-26	8.20%	0.00%	Y	B2/B	Industrials	Acquisition
18-Oct	Hub International	1,270.0	TLB (Cov-lite)	L+400bp	16-Apr-25	6.55%	1.00%	Y	B3/B	Financial	Refinancing
16-Jan	Hubbard Radio	85.0	1st Lien TL	L+350bp	22-Apr-25	7.23%	0.00%	N	B1/B+	Broadcasting	Acquisition
17-May	Hudson River Trading	125.0	TLB (Cov-lite)	L+350bp	8-Apr-25	6.05%	0.00%	Y	Ba2/BB-	Financial	General Corporate
12-Aug	Hyland Software	205.0	1st Lien TL (Cov-lite)	L+350bp	1-Jul-24	5.95%	0.75%	Y	B2/B-	Technology	Dividend
12-Aug	Hyland Software	115.0	2nd Lien TL (Cov-lite)	L+700bp	1-Jul-25	9.71%	0.75%	Y	B2/B-	Technology	Dividend
22-Mar	Hyperion Insurance	160.0	TLB (Cov-lite)	L+350bp	18-Dec-24	6.29%	1.00%	Y	B2/B	Financial	Acquisition
26-Nov	Hyperion Insurance Group Ltd	100.0	TLB (Cov-lite)	L+350bp	24-Nov-24	5.64%	1.00%	Y	B2/B	Financial	Acquisition
27-Aug	Hyperion Materials & Technologies	240.0	1st Lien TL (Cov-lite)	L+550bp	20-Aug-26	8.41%	0.00%	Y	NR/NR	Industrials	Refinancing
27-Aug	Hyperion Materials & Technologies	100.0	2nd Lien TL (Cov-lite)	L+900bp	20-Aug-27	12.39%	0.00%	Y	NR/NR	Industrials	Refinancing
22-May	IAA Spinco	800.0	1st Lien TL (Cov-lite)	L+225bp	20-May-26	4.84%	0.00%	Y	Ba3/BB-	Automotive	Other
4-Jun	Idera	100.0	TLB (Cov-lite)	L+450bp	18-Jun-26	7.10%	1.00%	Y	B3/B-	Technology	Acquisition
13-Aug	Idera	40.0	1st Lien (Cov-lite)	L+450bp	30-May-24	7.14%	1.00%	Y	B3/B-	Technology	Acquisition
8-May	II-VI	720.0	TLB (Cov-lite)	L+350bp	6-May-26	6.33%	0.00%	Y	B1/BB-	Technology	Acquisition
11-Jun	Imperial Dade	660.0	1st Lien TL (Cov-lite)	L+400bp	9-Jun-26	6.68%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
11-Jun	Imperial Dade	130.0	DD-1st Lien TL (Cov-lite)	L+400bp	10-Jun-21	6.68%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
30-Jul	Ineos Enterprises Holdings	450.0	1st Lien TL (Cov-lite)	L+400bp	27-Jul-26	6.66%	1.00%	Y	Ba3/BB	Chemicals	Acquisition
16-Oct	Infoblox	175.0	1st Lien TL (Cov-lite)	L+450bp	20-Nov-23	6.63%	0.00%	Y	B2/B-	Technology	Refinancing
31-Jan	Inmar	415.0	TL (cov-lite)	L+400bp	30-Apr-24	7.49%	1.00%	Y	B2/B	Services	Acquisition
24-Sep	Inmarsat	1,750.0	TLB (Cov-lite)	L+450bp	21-Sep-26	7.19%	1.00%	Y	B1/B+	Cable/Satellite	Acquisition
1-Nov	InnovaCare	550.0	1st Lien TL (Cov-lite)	L+575bp	30-Oct-26	8.93%	1.00%	Y	B1/B+	Healthcare	Acquisition
27-Feb	Innovative Water Care	360.0	1st Lien TL	L+500bp	25-Feb-26	8.88%	1.00%	N	B3/B	Services	Acquisition
27-Feb	Innovative Water Care	100.0	2nd Lien TL	L+900bp	25-Feb-27	14.13%	1.00%	N	B3/B	Services	Acquisition
12-Apr	Insight Global	30.0	1st Lien TL (Cov-lite)	L+400bp	10-Apr-25	6.72%	1.00%	Y	B3/B-	Services	Dividend
18-Dec	Installed Building Products	200.0	TLB (Cov-lite)	L+225bp	30-Mar-25	4.22%	0.00%	Y	B1/BB-	Housing	Repricing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
4-Mar	Institutional Shareholder Services	505.0	1st Lien TL	L+450bp	2-Mar-26	7.35%	0.00%	N	NR/NR	Services	Acquisition
18-Jul	Insurity	385.0	1st Lien TL (Cov-lite)	L+400bp	16-Jul-26	6.56%	0.00%	Y	B3/B-	Technology	Acquisition
18-Nov	Integer Holdings	563.3	TLB (Cov-lite)	L+250bp	11-Oct-22	4.48%	1.00%	Y	B1/B+	Healthcare	Repricing
13-Aug	Invenergy Thermal Operating	75.0	1st Lien	L+350bp	11-Aug-25	5.95%	0.00%	N	Ba2/BB	Utility	Dividend
17-Jul	ION Media Networks	1,366.0	TLB (Cov-lite)	L+300bp	15-Dec-24	5.54%	0.00%	Y	B1/BB-	Broadcasting	General Corporate
16-Dec	IQVIA	735.0	TLB (Cov-lite)	L+175bp	16-Jan-25	3.71%	0.00%	Y	B3/B	Healthcare	Repricing
16-Dec	IQVIA	535.0	TLB (Cov-lite)	L+175bp	23-Feb-24	3.71%	0.00%	Y	Ba2/BB+	Healthcare	Repricing
18-Oct	Iridium Satellite	1,450.0	TLB (Cov-lite)	L+375bp	16-Oct-26	6.34%	1.00%	Y	B2/B	Telecom	Refinancing
9-Aug	Jaggaer	510.0	1st Lien TL (Cov-lite)	L+400bp	7-Aug-26	6.55%	0.00%	Y	B3/B-	Technology	Acquisition
12-Apr	Jane Street Group	420.0	1st Lien TL (Cov-lite)	L+300bp	13-Aug-22	5.65%	0.00%	Y	Ba3/BB-	Financial	General Corporate
7-Aug	Janus International	106.0	1st Lien LT (Cov-lite)	L+375bp	12-Mar-25	6.43%	1.00%	Y	B2/B	Housing	Refinancing
26-Feb	Janus International	75.0	TLB (Cov-lite)	L+450bp	27-Feb-25	7.54%	0.00%	Y	B2/B	Housing	Acquisition
25-Apr	JBS USA	1,900.0	TLB (Cov-lite)	L+250bp	23-Apr-26	5.14%	0.00%	Y	Ba3/BB-	Food/Beverages	Refinancing
10-Dec	JBS USA	1,891.0	1st Lien TL (Cov-lite)	L+200bp	3-May-26	3.96%	0.00%	Y	Ba3/BB	Food/Beverages	Repricing
22-May	Jefferies Finance	750.0	1st Lien TL (Cov-lite)	L+375bp	20-May-26	6.34%	0.00%	Y	Ba3/BB-	Financial	Refinancing
12-Sep	Jeld-Wen	125.0	TLB (Cov-lite)	L+200bp	28-Dec-24	4.29%	0.00%	Y	Ba3/BB-	Housing	Refinancing
28-Jun	Justrite Safety Group	410.0	1st Lien TL (Cov-lite)	L+450bp	26-Jun-26	7.36%	0.00%	Y	B3/B	Industrials	Refinancing
28-Jun	Justrite Safety Group	50.0	DD-TLB (Cov-lite)	L+450bp	15-Jun-26	7.36%	0.00%	Y	B3/B	Industrials	Refinancing
14-Aug	Kaman Distribution	320.0	1st Lien TL (Cov-lite)	L+500bp	12-Aug-26	7.66%	0.00%	Y	B3/B	Industrials	Acquisition
14-Aug	Kaman Distribution	115.0	2nd lien TL (Cov-lite)	L+900bp	12-Aug-27	12.16%	0.00%	Y	B3/B	Industrials	Acquisition
24-Oct	Kantar	250.0	TLB	L+500bp	22-Oct-26	8.11%	0.00%	N	B2/B	Financial	Acquisition
13-Sep	KAR Auction Services	950.0	TLB (Cov-lite)	L+225bp	11-Sep-26	4.49%	0.00%	Y	B1/BB-	Automotive	Refinancing
30-Jul	KDC	105.0	1st Lien TL (Cov-lite)	L+425bp	21-Dec-25	6.77%	0.00%	Y	B2/B	Consumer Products	Acquisition
29-Apr	Kestra Advisor Services Holdings	425.0	TLB (Cov-lite)	L+425bp	27-Apr-26	7.08%	0.00%	Y	B3/B+	Financial	Acquisition
22-Apr	Kettle Cuisine	16.6	1st Lien TL (Cov-lite)	L+375bp	19-Oct-25	6.46%	1.00%	Y	B2/B	Food/Beverages	Acquisition
12-Jun	Kindred at Home	410.0	1st Lien TL (Cov-lite)	L+375bp	2-Jul-25	6.21%	0.00%	Y	B1/B	Healthcare	Refinancing
29-Jan	Kofax	410.0	1st Lien TL (Cov-lite)	L+425bp	22-Mar-25	7.75%	1.00%	Y	B2/B	Technology	Acquisition
8-May	Kontoor Brands	300.0	TLB	L+425bp	6-May-26	7.08%	0.00%	N	Ba2/BB-	Consumer Products	Other
15-Aug	KORE Wireless	35.0	TLB	L+550bp	6-Jan-25	8.25%	0.00%	N	B3/B-	Telecom	Acquisition
27-Mar	LegalShield	175.4	1st Lien TL (Cov-lite)	L+325bp	25-Mar-25	6.16%	0.00%	Y	B2/B	Services	Dividend
25-Jul	LegalShield	60.0	TLB (Cov-lite)	L+325bp	11-May-25	5.78%	0.00%	Y	B2/B	Services	Acquisition

Source: J.P. Morgan.

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
21-Nov	Level 3 Financing	3,111.0	TLB (Cov-lite)	L+175bp	15-Mar-27	3.75%	0.00%	Y	Ba3/BB	Telecom	Refinancing
13-Dec	Liason	225.0	1st Lien TL (Cov-lite)	L+450bp	11-Dec-26	6.59%	1.00%	Y	B2/B	Services	Acquisition
23-Oct	Liberty Latin America	1,000.0	1st Lien TL	L+500bp	20-Oct-26	7.45%	0.00%	N	B1/B+	Cable/Satellite	Acquisition
30-Jan	LifeMiles	100.0	TLB	L+550bp	30-Jul-22	8.38%	1.00%	N	Ba2/BB-	Transportation	Dividend
9-May	Lightbox	155.0	1st Lien TL	L+500bp	7-May-26	7.96%	0.00%	N	NR/NR	Services	Acquisition
9-May	Lightbox	35.0	DD-1st Lien TL	L+500bp	8-May-21	7.83%	0.00%	N	NR/NR	Services	Acquisition
3-Jun	Liqui-Box	530.0	1st Lien TL	L+450bp	1-Jun-26	7.25%	1.00%	N	B2/B	Paper/Packaging	Acquisition
11-Oct	Live Nation Entertainment	950.0	1st Lien TL	L+175bp	9-Oct-26	3.93%	0.00%	N	Ba2/BB-	Gaming/Leisure	Refinancing
29-Apr	Livingston International	265.0	1st Lien TL (Cov-lite)	L+575bp	27-Apr-26	8.83%	0.00%	Y	B2/B-	Services	Acquisition
10-Apr	Lonestar II Gen. Holdings, LLC	250.0	TLB (Cov-lite)	L+500bp	8-Apr-26	8.10%	0.00%	Y	NR/NR	Utility	Refinancing
10-Apr	Lonestar II Gen. Holdings, LLC	30.0	TLC (Cov-lite)	L+500bp	8-Apr-26	8.10%	0.00%	Y	NR/NR	Utility	Refinancing
29-Jul	Loparex International	375.0	1st Lien TL (Cov-lite)	L+450bp	27-Jul-26	7.19%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
7-Nov	LPL Holdings	1,070.0	1st Lien TL (Cov-lite)	L+175bp	5-Nov-26	4.63%	0.00%	Y	Baa2/BB+	Financial	Refinancing
21-May	Lucid Energy Group II Borrower	125.0	TLB-2	L+300bp	4-Feb-25	6.29%	1.00%	N	B2/B	Energy	General Corporate
2-Apr	Lyons Magnus	75.0	1st Lien TL (Cov-lite)	L+400bp	15-Nov-24	6.85%	1.00%	Y	B2/B	Food/Beverages	Acquisition
5-Aug	Mack Real Estate/CMTG	450.0	1st Lien TL	L+325bp	3-Aug-26	5.77%	0.00%	N	Ba3/BB-	Financial	General Corporate
11-Mar	Main Event Entertainment	125.0	TLB (Cov-lite)	L+650bp	9-Mar-26	TBD	0.00%	Y	B3/B-	Gaming/Leisure	Refinancing
11-Mar	Main Event Entertainment	75.0	DD-TLB (Cov-lite)	L+650bp	9-Mar-26	TBD	0.00%	Y	B3/B-	Gaming/Leisure	Refinancing
25-Jul	Mannington Mills	300.0	TLB (Cov-lite)	L+400bp	23-Jul-26	6.66%	0.00%	Y	B1/BB-	Housing	Refinancing
27-Nov	Marriott Ownership Resorts	893.0	TLB (Cov-lite)	L+175bp	6-Aug-25	3.71%	0.00%	Y	Ba2/BB	Gaming/Leisure	Repricing
29-Jan	Material Handling Systems	45.0	TLB (Cov-lite)	L+500bp	28-Apr-24	8.00%	1.00%	Y	B2/B	Industrials	Refinancing
10-Jun	McAfee	300.0	1st Lien TL (Cov-lite)	L+375bp	10-Sep-24	6.36%	0.00%	Y	B2/B	Technology	Dividend
30-Oct	McDermott International	850.0	Superpriority Loan	L+1000bp	28-Oct-21	12.78%	1.00%	N	Caa2/CC	Energy	General Corporate
3-Oct	MDVIP	45.0	TLB (Cov-lite)	L+425bp	6-Nov-24	6.82%	1.00%	Y	B3/B	Healthcare	Dividend
14-May	Medallion Midstream	50.0	1st Lien TL	L+325bp	14-Oct-24	6.08%	1.00%	N	B2/B	Energy	General Corporate
18-Nov	Mediaocean	275.0	TLB (Cov-lite)	L+400bp	29-Jul-25	6.09%	0.00%	Y	B2/B	Technology	Refinancing
3-Oct	Medical Solutions Holdings	291.0	1st Lien TL (Cov-lite)	L+450bp	20-Jul-24	7.06%	1.00%	Y	B2/B	Healthcare	Acquisition
3-Oct	Medical Solutions Holdings	75.0	2nd Lien TL (Cov-lite)	L+875bp	20-Jul-25	11.95%	1.00%	Y	B2/B	Healthcare	Acquisition
23-Sep	MeridianLink	60.0	TLB (Cov-lite)	L+400bp	3-Jun-25	6.49%	1.00%	Y	B3/B-	Technology	General Corporate
26-Sep	Merrill Corp	400.0	1st Lien TL (Cov-lite)	L+500bp	24-Sep-26	7.35%	1.00%	Y	B2/B	Technology	Dividend
18-Sep	MetroNet Systems Holdings	240.0	first-lien term loan	L+450bp	16-Sep-26	6.98%	1.00%	N	B3/B-	Telecom	Refinancing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
4-Nov	MI Windows and Doors	675.0	TLB (Cov-lite)	L+550bp	30-Oct-26	8.67%	0.00%	Y	B2/B+	Housing	Acquisition
29-Jul	Midcontinent Communications	650.0	1st Lien TL (Cov-lite)	L+225bp	27-Jul-26	4.72%	0.00%	Y	B1/BB-	Cable/Satellite	Refinancing
27-Feb	Millennium Trust	610.0	1st Lien TL (Cov-lite)	L+500bp	25-Feb-26	8.13%	0.00%	Y	B3/B-	Financial	Acquisition
26-Feb	Mirion Technologies	450.0	1st Lien TL (Cov-lite)	L+400bp	24-Feb-26	6.79%	0.00%	Y	B2/B	Technology	Refinancing
4-Dec	Mirion Technologies	66.0	TLB (Cov-lite)	L+400bp	22-Mar-26	6.04%	0.00%	Y	B2/B	Technology	Acquisition
28-Jun	Mirion Technologies	34.0	TLB (Cov-lite)	L+400bp	14-Apr-26	6.59%	0.00%	Y	B2/B	Technology	Acquisition
8-May	Mister Car Wash Holdings	800.0	1st Lien TL (Cov-lite)	L+350bp	6-May-26	6.15%	0.00%	Y	B3/B-	Services	Dividend
27-Mar	Mister Car Wash Holdings	60.0	TLB (Cov-lite)	L+325bp	10-Aug-21	6.05%	1.00%	Y	B2/B-	Services	Refinancing
8-May	Mister Car Wash Holdings	40.0	DD-1st Lien TL (Cov-lite)	L+350bp	7-May-21	6.15%	0.00%	Y	B3/B-	Automotive	Dividend
26-Sep	MKS Instruments	896.8	TLB-6 (Cov-lite)	L+175bp	17-Feb-26	3.98%	0.00%	Y	Ba1/BB+	Technology	Repricing
18-Jan	MKS Instruments	650.0	B-2 TL (Cov-lite)	L+225bp	16-Jan-26	5.28%	0.00%	Y	B2/B	Technology	Acquisition
18-Apr	Momentive Performance Materials	750.0	TLB (Cov-lite)	L+325bp	16-Apr-24	5.97%	0.00%	Y	B2/B+	Chemicals	Acquisition
11-Jun	MoneyGram International	645.0	1st Lien TL	L+600bp	10-Jun-23	8.83%	1.00%	N	B3/B	Services	Refinancing
27-Jun	MoneyGram International	645.0	1st Lien TL	L+600bp	10-Jun-23	9.31%	1.00%	N	B3/B	Services	Refinancing
25-Oct	Monotype Imaging	425.0	1st Lien TL (Cov-lite)	L+550bp	23-Oct-26	9.19%	0.00%	Y	B3/B-	Technology	Acquisition
3-Jun	MRO Holdings	360.0	1st Lien TL (Cov-lite)	L+500bp	1-Jun-26	7.63%	0.00%	Y	B2/B+	Industrials	Dividend
19-Jun	Multi-Color	640.0	1st Lien TL (Cov-lite)	L+450bp	16-Jun-26	7.41%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
9-Apr	MW Industries	50.0	1st Lien TL (Cov-lite)	L+375bp	9-Sep-24	6.85%	0.00%	Y	B3/B	Industrials	Acquisition
2-Aug	MyEyeDr.	845.0	1st Lien TL (Cov-lite)	L+425bp	31-Jul-26	6.95%	0.00%	Y	B3/B	Healthcare	Acquisition
2-Aug	MyEyeDr.	360.0	2nd Lien TL (Cov-lite)	L+825bp	31-Jul-27	11.33%	0.00%	Y	Caa2/CCCC+	Healthcare	Acquisition
2-Aug	MyEyeDr.	211.0	DD-TLB (Cov-lite)	L+425bp	31-Jul-26	6.95%	0.00%	Y	B3/B	Healthcare	Acquisition
20-Jun	myNEXUS	200.0	1st Lien TL	L+650bp	15-Jun-24	10.07%	0.00%	N	NR/NR	Services	Dividend
8-Mar	MYOB Group	486.0	1st Lien TL (Cov-lite)	L+400bp	6-Mar-26	6.73%	0.00%	Y	B2/B	Technology	Acquisition
26-Jul	NASCAR	1,410.0	1st Lien TL (Cov-lite)	L+275bp	24-Jul-26	5.28%	0.00%	Y	Ba2/BB	Gaming/Leisure	Acquisition
21-Oct	National Mentor	100.0	TLB (Cov-lite)	L+425bp	15-Mar-26	6.49%	0.00%	Y	B2/B	Healthcare	Dividend
12-Nov	National Seating and Mobility	420.0	1st Lien TL (Cov-lite)	L+525bp	10-Nov-26	7.66%	0.00%	Y	B2/B	Healthcare	Acquisition
22-May	Nautilus Power	70.0	1st Lien TL	L+425bp	22-May-24	6.90%	1.00%	N	NR/NR	Utility	Dividend
21-Aug	Navex Global	100.0	1st Lien TL (Cov-lite)	L+325bp	19-Aug-25	6.14%	0.00%	Y	B3/B-	Services	Acquisition
1-Jul	Navitas Midstream Midland Basin	40.0	TLB (Cov-lite)	L+450bp	28-Dec-24	8.11%	1.00%	Y	B3/B+	Energy	General Corporate
8-Aug	NCR Corp	400.0	DD-TLB (Cov-lite)	L+250bp	6-Aug-26	4.81%	0.00%	Y	B1/BB	Technology	Refinancing
8-Aug	NCR Corp	350.0	1st Lien TL (Cov-lite)	L+250bp	6-Aug-26	4.81%	0.00%	Y	B1/BB	Technology	Refinancing

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
25-Apr	NEO Tech	325.0	TLB	L+500bp	23-Apr-26	7.83%	1.00%	N	B2/B+	Technology	Refinancing
26-Apr	Neovia Logistics	325.0	1st Lien TL (Cov-lite)	L+650bp	24-Apr-24	9.83%	0.00%	Y	Caa1/CCC+	Services	Dividend
17-Jul	Nestle Skin Health	2,550.0	TLB (Cov-lite)	L+425bp	15-Jul-26	6.84%	1.00%	Y	B3/B	Consumer Products	Acquisition
2-May	Netsmart	48.0	1st Lien TL (Cov-lite)	L+375bp	23-Apr-23	6.96%	1.00%	Y	B3/B-	Technology	Acquisition
26-Feb	Neustar	200.0	TLB (Cov-lite)	L+450bp	13-Aug-24	7.66%	0.00%	Y	B2/B	Telecom	Refinancing
14-Mar	New Fortress Energy	500.0	1st Lien TL	L+825bp	12-Mar-24	12.60%	1.50%	N	B2/B	Energy	General Corporate
20-Mar	Newport Group	63.5	1st Lien TL (Cov-lite)	L+375bp	16-Sep-25	6.62%	0.00%	Y	B3/B	Financial	Acquisition
20-Jun	Nexstar Media Group	3,040.0	TLB-3 (Cov-lite)	L+275bp	6-Jan-24	5.26%	0.00%	Y	B1/BB-	Broadcasting	Acquisition
16-Dec	NFP Corp.	175.0	1st Lien TL (Cov-lite)	L+300bp	17-Jan-24	5.20%	0.00%	Y	B3/B	Financial	Acquisition
20-Mar	Nine West	325.0	Exit TLB	L+800bp	18-Mar-24	11.63%	1.00%	N	B3/B-	Consumer Products	DIP/Exit
19-Dec	NN Inc.	260.0	TLB	L+525bp	6-Oct-22	7.65%	0.75%	N	B3/B	Industrials	Refinancing
10-Apr	NSO Group	300.0	1st Lien TL	L+700bp	8-Apr-25	12.10%	0.00%	N	B2/B	Technology	Acquisition
28-Jun	Nuvei Technologies	619.0	1st Lien LT	L+500bp	7-Sep-25	7.99%	1.00%	N	B3/B-	Financial	Acquisition
28-Jun	Nuvei Technologies	225.0	2nd Lien LT	L+900bp	7-Sep-26	12.41%	1.00%	N	Caa2/CCC	Technology	Acquisition
29-Apr	NVA Holdings	300.0	TL (cov-lite)	L+350bp	20-Feb-25	6.33%	1.00%	Y	B3/B	Healthcare	Acquisition
13-Mar	Ocwen Financial	120.0	1st Lien TL	L+500bp	21-Dec-20	8.35%	1.00%	N	Caa1/B-	Financial	General Corporate
24-Sep	OEConnection	422.0	1st Lien TL (Cov-lite)	L+400bp	22-Sep-26	6.36%	0.00%	Y	B3/B-	Automotive	Acquisition
24-Sep	OEConnection	40.0	DD-TLB (Cov-lite)	L+400bp	22-Sep-26	6.36%	0.00%	Y	B3/B-	Technology	Acquisition
17-May	Omnia Partners	160.0	1st Lien TL (Cov-lite)	L+375bp	14-May-26	6.52%	0.00%	Y	B3/B	Services	Dividend
17-Sep	ON Semiconductor	1,635.0	TLB (Cov-lite)	L+200bp	14-Sep-26	4.22%	0.00%	Y	Ba1/BB	Technology	Refinancing
19-Dec	One Sky Flight	405.0	1st Lien TL	L+750bp	17-Dec-24	10.44%	1.00%	N	B2/B	Industrials	Refinancing
24-Oct	Ontic	480.0	1st Lien TL (Cov-lite)	L+475bp	22-Oct-26	7.18%	0.00%	Y	B3/B-	Industrials	Acquisition
24-Oct	Ontic	175.0	2nd Lien TL (Cov-lite)	L+850bp	22-Oct-27	11.40%	0.00%	Y	B3/B-	Industrials	Acquisition
24-Oct	Ontic	75.0	DD-TLB (Cov-lite)	L+475bp	23-Oct-20	7.18%	0.00%	Y	B3/B-	Industrials	Acquisition
22-May	Option Care	925.0	1st Lien TL (Cov-lite)	L+450bp	20-May-26	7.27%	0.00%	Y	B3/B-	Healthcare	Acquisition
28-Feb	Orchid Orthopedic Solutions	485.0	1st Lien TL (Cov-lite)	L+450bp	26-Feb-26	7.37%	0.00%	Y	B3/B	Healthcare	Acquisition
15-Feb	Oregon Clean Energy	530.0	TLB	L+375bp	13-Feb-26	6.68%	1.00%	N	NR/NR	Utility	Dividend
10-Jul	Orion Advisor Solutions	45.0	1st Lien TL (Cov-lite)	L+375bp	15-May-25	6.43%	0.75%	Y	B3/B-	Financial	Acquisition
10-May	Oryx Southern Delaware Holdings	1,500.0	1st Lien TL	L+400bp	8-May-26	6.95%	0.00%	N	B2/B	Energy	Acquisition
14-Nov	Outfront Media Capital	600.0	TLB (Cov-lite)	L+175bp	12-Nov-26	3.75%	0.00%	Y	Ba3/BB-	Broadcasting	Refinancing
21-Jun	P&L Developments, LLC	312.5	1st Lien TL	L+750bp	15-Jun-24	11.13%	2.00%	N	B2/B-	Healthcare	Acquisition

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2019 US dollar new loans
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Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
7-Feb	P.F. Chang's	430.0	TLB	L+650bp	5-Feb-26	9.48%	0.00%	N	NR/B	Food/Beverages	Acquisition
29-Jan	Pacific Gas & Electric	1,500.0	DIP-TL	L+225bp	22-Dec-20	5.13%	0.00%	N	NR/NR	Utility	DIP/Exit
29-Jan	Pacific Gas & Electric	500.0	DD-DIP	L+225bp	22-Dec-20	5.13%	0.00%	N	NR/NR	Utility	DIP/Exit
3-Jun	Packers Sanitation Services	120.0	1st Lien TL (Cov-lite)	L+325bp	17-Dec-24	6.06%	1.00%	Y	B3/B-	Services	Dividend
15-Apr	Park Place Technologies	54.0	1st Lien TL (Cov-lite)	L+400bp	15-Mar-25	6.72%	1.00%	Y	B3/B-	Technology	Acquisition
8-Aug	Park Place Technologies	30.6	1st Lien LT (Cov-lite)	L+400bp	13-Mar-25	6.53%	1.00%	Y	B3/B-	Technology	Acquisition
8-Aug	Park Place Technologies	30.5	2nd Lien LT (Cov-lite)	L+800bp	13-Mar-26	6.53%	1.00%	Y	B3/B-	Technology	Acquisition
7-Nov	Parts Town	788.0	1st Lien TL	L+550bp	5-Nov-25	7.81%	1.00%	N	B3/B-	Retail	Acquisition
13-Mar	Parts Town	30.0	1st Lien TL (Cov-lite)	L+400bp	13-Dec-24	7.06%	1.00%	Y	B3/B-	Retail	Acquisition
15-Oct	Patriot Rail & Ports	285.0	TLB (Cov-lite)	L+525bp	13-Oct-26	8.02%	0.00%	Y	B2/B-	Transportation	Acquisition
19-Aug	PaySimple	415.0	1st Lien TL (Cov-lite)	L+550bp	17-Aug-25	8.37%	0.00%	Y	NR/NR	Technology	Refinancing
19-Aug	PaySimple	135.0	DD-TLB (Cov-lite)	L+550bp	17-Aug-25	8.37%	0.00%	Y	NR/NR	Technology	Refinancing
15-May	PCI Gaming	1,300.0	TLB (Cov-lite)	L+300bp	13-May-26	5.64%	0.00%	Y	Ba3/BB+	Gaming/Leisure	Acquisition
13-Dec	PCI Gaming	1,177.0	TLB (Cov-lite)	L+250bp	6-May-26	4.46%	0.00%	Y	Ba3/BB+	Gaming/Leisure	Repricing
1-Jul	Peraton	40.0	TLB (Cov-lite)	L+525bp	15-Apr-24	8.07%	1.00%	Y	B3/B	Technology	Acquisition
12-Jun	Perforce Software	800.0	1st Lien TL (Cov-lite)	L+450bp	10-Jun-26	7.06%	0.00%	Y	B3/B-	Technology	Refinancing
5-Feb	Perforce Software	410.0	1st Lien TL	L+450bp	5-Dec-24	7.36%	1.00%	N	B3/B-	Technology	Acquisition
30-Sep	PeroxyChem	315.0	TLB	L+500bp	25-Sep-24	7.41%	0.00%	N	NR/NR	Chemicals	Dividend
5-Apr	Perstorp	386.2	1st Lien TL (Cov-lite)	L+475bp	3-Apr-26	7.73%	0.00%	Y	B2/B	Chemicals	Refinancing
15-Mar	PetVet Care Centers	125.0	1st Lien TL (Cov-lite)	L+325bp	19-Feb-25	5.98%	0.00%	Y	B3/B	Healthcare	Refinancing
11-Jul	PHI	225.0	TLB	L+700bp	8-Jul-24	10.31%	1.00%	N	NR/NR	Energy	Refinancing
19-Jul	Pike Corp	1,020.0	TLB (Cov-lite)	L+325bp	17-Jul-26	5.73%	1.00%	Y	B2/B	Utility	Refinancing
19-Dec	Pitney Bowes	650.0	TLB	L+550bp	16-Dec-24	8.42%	0.00%	N	Ba2/BB+	Services	Refinancing
7-May	PlayPower	400.0	TLB (Cov-lite)	L+550bp	5-May-26	8.33%	0.00%	Y	B3/B	Consumer Products	Dividend
4-Dec	Playtika Holding	2,500.0	1st Lien TL (Cov-lite)	L+600bp	1-Dec-24	8.73%	1.00%	Y	B1/B+	Gaming/Leisure	Refinancing
30-Jul	PLZ Aerospace	644.0	1st Lien TL (Cov-lite)	L+350bp	28-Jul-26	6.04%	0.00%	Y	B2/B	Services	Refinancing
18-Apr	Polychem Corporation	70.0	1st Lien TL	L+500bp	11-Apr-25	7.93%	0.00%	N	NR/NR	Chemicals	Acquisition
18-Nov	Polyconcept	183.0	TLB (Cov-lite)	L+450bp	30-Jul-23	6.89%	1.00%	Y	B2/B	Consumer Products	Acquisition
30-Apr	Polymer Process Solutions	335.0	1st Lien TL (Cov-lite)	L+600bp	28-Apr-26	9.32%	0.00%	Y	B/NR	Industrials	Acquisition
27-Nov	Portillo's	332.4	1st Lien TL (Cov-lite)	L+550bp	25-Aug-24	7.90%	1.00%	Y	B3/B-	Food/Beverages	Refinancing
18-Mar	Power Solutions	4,200.0	1st Lien TL (Cov-lite)	L+350bp	16-Mar-26	6.38%	0.00%	Y	B1/B+	Automotive	Acquisition

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25-Jul	Pregis	615.0	1st Lien TL (Cov-lite)	L+400bp	23-Jul-26	6.56%	0.00%	Y	B3/B	Paper/Packaging	Acquisition
23-Jul	Press Ganey	1,250.0	1st Lien TL (Cov-lite)	L+350bp	21-Jul-26	6.04%	0.00%	Y	B3/B	Services	Acquisition
16-Sep	Prime Security Services Borrower	3,110.0	TLB (Cov-lite)	L+325bp	11-Sep-26	5.67%	1.00%	Y	B1/B+	Services	Refinancing
30-Oct	Promontory Interfinancial Network	630.0	1st Lien TL (Cov-lite)	L+375bp	28-Oct-26	5.91%	0.00%	Y	B2/B-	Financial	Acquisition
17-Oct	ProQuest	725.0	1st Lien TL (Cov-lite)	L+350bp	15-Oct-26	5.77%	0.00%	Y	B2/B	Diversified Media	Refinancing
27-Mar	PS Logistics	45.0	1st Lien TL	L+475bp	1-Mar-25	7.68%	1.00%	N	B2/B+	Transportation	Acquisition
30-Sep	PSAV	515.0	TLB (Cov-lite)	L+450bp	25-Sep-26	7.19%	1.00%	Y	B2/B	Services	Acquisition
9-Apr	PSS Industrial Group	300.0	TLB	L+600bp	7-Apr-25	9.10%	0.00%	N	B3/B-	Energy	Refinancing
20-Aug	Q Holding	275.0	1st Lien TL	L+500bp	15-Dec-23	7.62%	1.00%	N	B3/B	Industrials	Refinancing
29-Mar	Qlik Technologies	465.0	TLB (Cov-lite)	L+425bp	18-Apr-24	7.09%	0.00%	Y	B3/B	Technology	Acquisition
2-Oct	Qualtek USA	100.0	TLB (Cov-lite)	L+625bp	31-Mar-25	9.16%	1.00%	Y	B3/B	Telecom	Refinancing
29-Mar	Quick Base	275.0	1st Lien TL (Cov-lite)	L+400bp	27-Mar-26	6.72%	0.00%	Y	B3/B-	Technology	Acquisition
30-Jan	Quirch Foods	165.0	1st Lien TL	L+600bp	28-Jan-26	9.00%	0.00%	N	NR/NR	Food/Beverages	Acquisition
7-Mar	Quorum Software	90.0	TLB (Cov-lite)	L+425bp	6-Oct-25	7.26%	0.00%	Y	B3/B-	Technology	Acquisition
19-Jun	Radiate Holdco	300.0	1st Lien TL (Cov-lite)	L+350bp	1-Feb-24	6.48%	0.75%	Y	B2/B	Cable/Satellite	Dividend
30-Jan	Radiology Partners	365.0	1st Lien TL (Cov-lite)	L+475bp	22-Jul-25	7.63%	0.00%	Y	B3/B	Healthcare	Acquisition
2-May	Radiology Partners	240.0	1st Lien TL (Cov-lite)	L+475bp	22-Jul-25	7.46%	0.00%	Y	B3/B	Healthcare	Acquisition
11-Apr	RadNet Management	100.0	1st Lien TL (Cov-lite)	L+375bp	11-Jun-23	6.47%	1.00%	Y	B2/B	Healthcare	Refinancing
28-Jun	Red Ventures	425.0	TLB (Cov-lite)	L+300bp	19-Nov-24	5.61%	0.00%	Y	B2/B+	Diversified Media	Refinancing
11-Dec	Reece Group	1,221.0	TLB (Cov-lite)	L+200bp	14-Jan-27	3.71%	0.00%	Y	Ba1/BB+	Housing	Repricing
6-Sep	Reece Group	100.0	TLB (Cov-lite)	L+200bp	4-Sep-25	4.16%	0.00%	Y	Ba1/BB+	Housing	Acquisition
18-Dec	Refinitiv U.S. Holdings	6,451.0	1st Lien TL (Cov-lite)	L+325bp	4-Oct-25	5.24%	0.00%	Y	B3/B	Services	Repricing
25-Nov	Refresco Holding BV	150.0	TLB (Cov-lite)	L+325bp	9-Mar-25	5.36%	0.00%	Y	B2/B+	Paper/Packaging	Acquisition
2-Aug	Rent-A-Center	200.0	1st Lien TL (Cov-lite)	L+450bp	31-Jul-26	7.22%	0.00%	Y	Ba3/BB-	Retail	Refinancing
6-Feb	Research Now	200.0	TLB (Cov-lite)	L+550bp	6-Dec-24	8.73%	1.00%	Y	B2/B-	Services	Acquisition
14-Nov	Restaurant Brands Int'l. Inc	5,350.0	TLB (Cov-lite)	L+175bp	12-Nov-26	3.72%	0.00%	Y	Ba3/BB	Food/Beverages	Refinancing
1-Feb	Revere Power	445.0	TLB	L+425bp	30-Jan-26	7.37%	0.00%	N	NR/NR	Industrials	Acquisition
1-Feb	Revere Power	70.0	TLC	L+425bp	30-Jan-26	7.37%	0.00%	N	NR/NR	Industrials	Acquisition
19-Nov	Rexnord	725.0	1st Lien TL (Cov-lite)	L+175bp	29-Jul-24	3.71%	0.00%	Y	Ba3/BB	Industrials	Repricing
26-Nov	Sabert Corp.	717.5	TLB (Cov-lite)	L+450bp	24-Nov-26	6.76%	1.00%	Y	B2/B	Paper/Packaging	Acquisition
4-Apr	Sabre Industries	445.0	1st Lien TL (Cov-lite)	L+450bp	2-Apr-26	7.35%	0.00%	Y	B2/B	Industrials	Acquisition

Source: J.P. Morgan.

Peter D. Acciavatti (1-212) 270-9633
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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
7-Aug	Savage Enterprises	960.3	1st Lien TL	L+400bp	5-Aug-25	6.48%	0.00%	N	B1/B+	Transportation	Repricing
15-Nov	SBA Communications	2,370.0	TLB	L+175bp	8-Apr-25	3.71%	0.00%	N	Ba3/BB	Telecom	Repricing
8-Aug	Sedgwick Claims Mngmt. Services	1,100.0	1st Lien TL (Cov-lite)	L+400bp	6-Aug-26	6.31%	0.00%	Y	B3/B	Services	Acquisition
23-May	Segra	100.0	TLB (Cov-lite)	L+300bp	6-Nov-24	5.71%	1.00%	Y	B2/B	Telecom	General Corporate
5-Dec	Select Medical	565.0	1st Lien TL (Cov-lite)	L+250bp	22-Mar-25	4.39%	0.00%	Y	B1/B+	Healthcare	Refinancing
31-Jul	Select Medical	500.0	TLB (Cov-lite)	L+250bp	8-Apr-25	5.04%	0.00%	Y	B1/B+	Healthcare	Refinancing
11-Dec	Select Medical Holdings	615.0	TLB (Cov-lite)	L+250bp	22-Mar-25	4.47%	0.00%	Y	B1/B+	Healthcare	Refinancing
15-Aug	Seminole Tribe of Florida	300.0	TLB	L+175bp	13-Aug-24	4.14%	0.00%	N	Baa2/BBB	Gaming/Leisure	Refinancing
18-Sep	Sensata Technologies	463.0	first-lien term loan	L+175bp	16-Sep-26	3.93%	0.00%	N	Ba2/BB+	Industrials	Refinancing
12-Apr	SERVPRO	325.0	1st Lien TL	L+350bp	10-Apr-26	6.15%	0.00%	N	B3/B	Services	Acquisition
27-Sep	Shearer's Food	701.0	1st Lien TL (Cov-lite)	L+425bp	13-Jan-22	6.94%	1.00%	Y	B3/B-	Food/Beverages	Refinancing
14-Aug	Shields Health Solutions Holdings	200.0	TLB (Cov-lite)	L+500bp	12-Aug-26	7.67%	0.00%	Y	B3/B-	Healthcare	Acquisition
2-Oct	Shift4 Payments	70.0	1st Lien TL	L+450bp	5-Nov-24	6.95%	1.00%	N	B2/B	Technology	Acquisition
2-Oct	Shutterfly	775.0	TLB (Cov-lite)	L+600bp	29-Sep-26	9.69%	1.00%	Y	B2/B	Technology	Acquisition
2-Oct	Shutterfly	255.0	TLB (Cov-lite)	L+650bp	29-Sep-26	9.99%	1.00%	Y	B2/B	Technology	Acquisition
18-Jul	Sinclair Television Group	1,300.0	TLB (Cov-lite)	L+250bp	16-Jul-26	4.99%	0.00%	Y	Ba3/BB-	Broadcasting	Acquisition
22-May	Sirius Computer	750.0	1st Lien TL (Cov-lite)	L+425bp	20-May-26	6.84%	0.00%	Y	B2/B	Technology	Acquisition
11-Apr	Six Flags Entertainment	800.0	TLB	L+200bp	9-Apr-26	4.65%	0.00%	N	B1/BB	Gaming/Leisure	Refinancing
4-Oct	Six Flags Entertainment	798.0	TLB	L+175bp	2-Apr-26	3.91%	0.00%	N	B1/BB	Gaming/Leisure	Repricing
18-Jun	Smart & Final Grocery	340.0	1st Lien TL (Cov-lite)	L+675bp	1-Jun-25	12.20%	0.00%	Y	B3/B	Retail	Acquisition
6-Jun	Smart Foodservice	425.0	TLB (Cov-lite)	L+475bp	4-Jun-26	7.47%	0.00%	Y	B2/B	Retail	Acquisition
21-Jun	SMB Shipping Logistics	50.0	TLB	L+400bp	15-Feb-24	5.23%	1.00%	N	B3/B-	Services	Acquisition
15-Mar	Sorenson Communications	700.0	1st Lien TL	L+650bp	1-Mar-24	10.87%	0.00%	N	B2/B	Services	Refinancing
22-Nov	Sotera Health	2,120.0	1st Lien TL (Cov-lite)	L+450bp	20-Nov-26	6.76%	1.00%	Y	B3/B	Healthcare	Dividend
19-Jul	Sotera Health	320.0	1st Lien TL (Cov-lite)	L+350bp	6-May-22	6.18%	1.00%	Y	B3/B	Healthcare	Dividend
24-Sep	Sotheby's	500.0	TLB (Cov-lite)	L+550bp	8-Jan-27	8.28%	1.00%	Y	B1/B+	Services	Acquisition
30-Apr	Sound Physicians	35.0	1st Lien TL (Cov-lite)	L+275bp	21-Jun-25	5.50%	0.00%	Y	B1/B	Healthcare	Acquisition
14-Jun	Spencer Spirit	385.0	1st Lien TL (Cov-lite)	L+600bp	12-Jun-26	8.93%	0.00%	Y	B2/B	Retail	Refinancing
8-Mar	Spring Education Group	106.0	TLB (Cov-lite)	L+425bp	6-Jul-25	7.10%	0.00%	Y	B3/B-	Services	Acquisition
9-Oct	Springer Nature	885.0	TLB	L+350bp	30-Aug-24	5.84%	1.00%	N	B2/B+	Diversified Media	Refinancing
22-Feb	Sprint	900.0	TLB-1 (Cov-lite)	L+300bp	21-Feb-24	6.16%	0.75%	Y	B2/B	Telecom	General Corporate

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2019 US dollar new loans
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24-Jul	SRAM	150.0	DD-TLB (Cov-lite)	L+275bp	26-Feb-24	5.23%	1.00%	Y	B1/BB-	Consumer Products	Dividend
8-Oct	SRS Distribution	250.0	TLB (Cov-lite)	L+450bp	12-May-25	7.30%	0.00%	Y	B3/B	Housing	Acquisition
19-Feb	St. Joseph Energy Center	407.7	TLB	L+350bp	1-May-25	6.64%	1.00%	N	Ba3/BB-	Utility	Refinancing
27-Jun	St. Joseph Energy Center	21.5	TLB	L+350bp	15-Apr-25	6.13%	1.00%	N	Ba3/BB-	Utility	General Corporate
24-Jan	StandardAero Aviation	1,395.0	1st Lien TL (Cov-lite)	L+400bp	22-Jan-26	6.90%	0.00%	Y	B3/B	Industrials	Acquisition
24-Jan	StandardAero Aviation	750.0	1st Lien TL (Cov-lite)	L+400bp	22-Jan-26	6.90%	0.00%	Y	B3/B	Industrials	Acquisition
9-Apr	Staples	2,000.0	1st Lien TL (Cov-lite)	L+500bp	7-Apr-26	7.85%	0.00%	Y	B1/B+	Services	Refinancing
9-Apr	Staples	300.0	1st Lien TL (Cov-lite)	L+450bp	7-Apr-24	7.35%	0.00%	Y	B1/B+	Services	Refinancing
11-Jul	Starwood Property Mortgage	400.0	TLB (Cov-lite)	L+250bp	8-Jul-26	5.02%	0.00%	Y	Ba2/BB	Financial	Refinancing
22-May	STATS	400.0	1st Lien TL (Cov-lite)	L+525bp	20-May-26	8.40%	0.00%	Y	B3/B-	Technology	Acquisition
15-Oct	Stonepeak Lonestar Holdings	800.0	1st Lien TL	L+450bp	13-Oct-26	7.12%	0.00%	N	B1/BB-	Energy	Refinancing
26-Nov	STV Group	225.0	1st Lien TL	L+525bp	24-Nov-26	7.56%	0.00%	N	B2/B+	Broadcasting	Acquisition
23-Apr	Sundyne US Purchaser	450.0	1st Lien TL (Cov-lite)	L+400bp	21-Apr-26	6.64%	0.00%	Y	B2/B	Industrials	Dividend
6-Nov	Syncsort	612.0	1st Lien TL (Cov-lite)	L+600bp	23-Aug-24	10.71%	1.00%	Y	B3/B-	Technology	Acquisition
7-Nov	Tacala LLC	75.0	1st Lien TL	L+400bp	17-Jan-25	6.31%	0.00%	N	B3/B-	Consumer	Dividend
7-Nov	Tacala LLC	20.0	2nd Lien TL (Cov-lite)	L+775bp	17-Jan-26	10.28%	0.00%	Y	B3/B-	Consumer	Dividend
28-Jun	Talen Energy Supply	500.0	TLB (Cov-lite)	L+375bp	26-Jun-26	6.47%	0.00%	Y	B2/B+	Utility	Refinancing
7-Mar	Tallgrass Energy	1,155.0	1st Lien TL	L+475bp	5-Mar-26	7.81%	0.00%	N	B1/B+	Energy	Acquisition
3-May	TAMKO Building Products	600.0	TLB (Cov-lite)	L+325bp	1-May-26	5.96%	0.00%	Y	B1/BB-	Housing	Refinancing
21-Mar	Tank Holding Corp.	500.0	1st Lien TL (Cov-lite)	L+400bp	19-Mar-26	6.73%	0.00%	Y	B3/B	Industrials	Acquisition
4-Dec	Tank Holding Corp.	30.0	1st Lien TL (Cov-lite)	L+400bp	22-Mar-26	6.06%	0.00%	Y	B3/B	Industrials	Refinancing
25-Nov	TeleGuam Holdings, LLC	146.2	1st Lien TL	L+450bp	21-Nov-25	5.83%	1.00%	N	B2/B+	Financial	Repricing
2-Oct	Telenet	220.0	1st Lien TL (Cov-lite)	L+225bp	19-Jul-26	4.44%	0.00%	Y	Ba3/BB-	Telecom	Refinancing
25-Nov	Telesat Canada and Telesat LLC	1,908.0	TLB (Cov-lite)	L+275bp	20-Nov-26	4.84%	0.00%	Y	B1/BB-	Cable/Satellite	Refinancing
15-Jul	Teneo	370.0	1st Lien TL (Cov-lite)	L+525bp	13-Jul-25	8.84%	1.00%	Y	B2/B	Services	Acquisition
5-Mar	Terex	200.0	TLB (Cov-lite)	L+275bp	6-Feb-24	5.66%	0.75%	Y	B1/BB	Industrials	Refinancing
25-Nov	Terrapure Environmental	465.0	1st Lien TL (Cov-lite)	L+500bp	23-Nov-26	7.29%	0.00%	Y	B2/B	Services	Acquisition
19-Jun	The Crosby Group	475.0	1st Lien TL (Cov-lite)	L+475bp	17-Jun-26	7.68%	0.00%	Y	B3/B-	Industrials	Refinancing
4-Apr	The Nordam Group	250.0	Exit TLB (Cov-lite)	L+550bp	2-Apr-26	8.60%	0.00%	Y	NR/B+	Industrials	DIP/Exit
4-Nov	The ServiceMaster Company	600.0	1st Lien TL	L+175bp	30-Oct-26	3.83%	0.00%	N	Ba3/BB-	Services	Refinancing
5-Nov	The Simply Good Foods Company	460.0	TLB (Cov-lite)	L+375bp	15-Jul-24	5.99%	1.00%	Y	B1/B+	Food/Beverages	Acquisition

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
30-Sep	The Topps Company	125.0	1st Lien TL	L+525bp	29-Sep-21	7.78%	1.25%	N	B2/B-	Consumer Products	Refinancing
15-Apr	The Wrench Group	225.0	1st Lien TL (Cov-lite)	L+425bp	13-Apr-26	7.09%	0.00%	Y	B3/B	Services	Acquisition
15-Apr	The Wrench Group	75.0	DD-TLB (Cov-lite)	L+425bp	14-Apr-21	7.09%	0.00%	Y	B3/B	Services	Acquisition
9-May	ThoughtWorks	185.0	1st Lien TL (Cov-lite)	L+400bp	29-Oct-24	6.71%	1.00%	Y	B2/B	Technology	Dividend
12-Jun	TIBCO	1,824.0	1st Lien TL (Cov-lite)	L+400bp	10-Jun-26	6.56%	0.00%	Y	B3/B-	Technology	Refinancing
22-Nov	Ticketek	205.0	TLB (Cov-lite)	L+425bp	20-Nov-26	6.49%	0.75%	Y	B2/B	Diversified Media	Acquisition
19-Nov	Time Manufacturing	47.0	1st Lien TL	L+500bp	15-Feb-23	7.28%	1.00%	N	NR/NR	Metals/Mining	Acquisition
7-Mar	Tivity Health	830.0	TLB	L+525bp	5-Mar-26	8.75%	0.00%	N	B1/B+	Services	Acquisition
6-Feb	Topgolf International	350.0	TLB	L+550bp	4-Feb-26	8.48%	0.00%	N	B3/B-	Gaming/Leisure	Refinancing
7-Jun	Tortoise Investments	40.0	1st Lien TL (Cov-lite)	L+350bp	7-Jan-25	6.08%	1.00%	Y	Ba2/BB-	Financial	Acquisition
14-Aug	Total Safety	330.0	1st Lien TL (Cov-lite)	L+600bp	12-Aug-25	10.54%	1.00%	Y	B3/B-	Services	Acquisition
14-Aug	Total Safety	37.5	DD-TLB (Cov-lite)	L+600bp	12-Aug-25	10.54%	1.00%	Y	B3/B-	Services	Acquisition
12-Apr	Trade Me	605.0	1st Lien TL (Cov-lite)	L+425bp	10-Apr-26	6.97%	0.00%	Y	B1/B	Retail	Acquisition
13-Nov	TransUnion	2,600.0	TLB (Cov-lite)	L+175bp	11-Nov-26	3.74%	0.00%	Y	Ba2/BB+	Services	Refinancing
18-Mar	Travelport Worldwide	2,800.0	1st Lien TL (Cov-lite)	L+500bp	16-Mar-26	8.13%	0.00%	Y	B3/B	Services	Acquisition
18-Mar	Travelport Worldwide	500.0	2nd Lien TL (Cov-lite)	L+900bp	16-Mar-27	12.38%	0.00%	Y	B3/B	Services	Acquisition
18-Dec	TRC Companies	219.3	1st Lien TL (Cov-lite)	L+500bp	15-Jun-24	7.49%	1.00%	Y	B2/B	Services	Acquisition
21-Feb	Trico Group	255.0	1st Lien TL	L+700bp	20-Feb-24	10.66%	1.00%	N	B3/B	Automotive	Acquisition
15-Mar	TruGreen	965.0	1st Lien TL (Cov-lite)	L+375bp	1-Mar-26	6.63%	0.00%	Y	B2/B	Services	Refinancing
3-May	Twin River Worldwide Holdings	300.0	TLB (Cov-lite)	L+275bp	1-May-26	5.46%	0.00%	Y	B1/BB-	Gaming/Leisure	Refinancing
18-Jun	U.S. Anesthesia Partners	200.0	1st Lien TL (Cov-lite)	L+300bp	22-Jul-24	5.70%	1.00%	Y	B2/B	Healthcare	Acquisition
14-Aug	U.S. Ecology	450.0	TLB (Cov-lite)	L+250bp	12-Aug-26	4.90%	0.00%	Y	Ba3/BB	Services	Acquisition
22-Nov	U.S. Foods	2,134.0	TLB (Cov-lite)	L+175bp	22-May-23	3.71%	0.00%	Y	Ba3/BB+	Food/Beverages	Repricing
15-Aug	U.S. Foods	1,500.0	TLB (Cov-lite)	L+200bp	13-Aug-26	4.29%	0.00%	Y	Ba3/BB+	Food/Beverages	Acquisition
14-Jun	U.S. Renal Care	1,620.0	TLB (Cov-lite)	L+500bp	12-Jun-26	7.93%	0.00%	Y	B3/B	Healthcare	Acquisition
6-Feb	U.S. Salt	285.0	1st Lien TL (Cov-lite)	L+475bp	4-Feb-26	7.73%	0.00%	Y	B3/B	Chemicals	Acquisition
26-Apr	UFC	1,873.0	1st Lien TL (Cov-lite)	L+325bp	24-Apr-26	5.89%	1.00%	Y	B2/B	Gaming/Leisure	Refinancing
8-Aug	UGI Energy Services	700.0	1st Lien TL	L+375bp	6-Aug-26	6.29%	0.00%	N	Ba3/BB+	Utility	Acquisition
13-Sep	Ultimate Fighting Championship	465.0	TLB (Cov-lite)	L+325bp	18-Apr-26	5.47%	1.00%	Y	B2/B	Gaming/Leisure	Dividend
8-Apr	Ultimate Software	2,300.0	1st Lien TL (Cov-lite)	L+375bp	6-Apr-26	6.40%	0.00%	Y	B3/B-	Technology	Acquisition
12-Jun	Unifrax	120.0	1st Lien TL (Cov-lite)	L+375bp	12-Dec-25	6.81%	0.00%	Y	B3/B-	Industrials	Acquisition

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2019 US dollar new loans
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3-Dec	Unison Software	179.7	1st Lien TL	L+450bp	15-May-23	6.82%	1.00%	N	NR/NR	Technology	Refinancing
3-Dec	Unison Software	50.0	1st Lien TL	L+450bp	15-May-23	6.82%	1.00%	N	NR/NR	Technology	Refinancing
28-Oct	United Pacific	450.0	1st Lien TL	L+400bp	26-Oct-26	6.33%	1.00%	N	B2/B	Retail	Refinancing
28-Oct	United Pacific	100.0	DD-TLB (Cov-lite)	L+400bp	27-Oct-21	6.33%	1.00%	Y	B2/B	Retail	Refinancing
10-Jun	United Planet Fitness Partners	475.0	1st Lien TL (Cov-lite)	L+450bp	8-Jun-26	7.17%	0.00%	Y	B2/B	Consumer Products	Refinancing
10-Jun	United Planet Fitness Partners	110.0	2nd lien TL (Cov-lite)	L+850bp	8-Jun-27	11.30%	0.00%	Y	B2/B	Gaming/Leisure	Refinancing
10-Jun	United Planet Fitness Partners	65.0	DD-1st Lien TL (Cov-lite)	L+450bp	9-Jun-21	7.17%	0.00%	Y	B2/B	Consumer Products	Refinancing
31-Jul	United Road Services	83.0	TLB (Cov-lite)	L+575bp	5-Mar-24	8.63%	1.00%	Y	B2/B	Transportation	Acquisition
7-Aug	United Site Services	150.0	TLB (Cov-lite)	L+375bp	5-Sep-24	6.41%	1.00%	Y	B3/B	Services	Acquisition
19-Mar	Uniti Group	1,880.0	1st Lien TL (Cov-lite)	L+500bp	6-Nov-22	7.63%	1.00%	Y	Caa2/CCC-	Financial	Refinancing
15-Nov	Univar	400.0	TLB (Cov-lite)	L+200bp	13-Nov-26	4.01%	0.00%	Y	Ba3/BB	Chemicals	Refinancing
22-Feb	Univar	300.0	TLB (Cov-lite)	L+250bp	21-Aug-24	5.29%	0.00%	Y	Ba3/BB	Chemicals	Acquisition
27-Jun	Upland Software	350.0	1st Lien TL (Cov-lite)	L+375bp	25-Jun-26	6.47%	0.00%	Y	B2/B	Technology	Refinancing
20-Nov	Upland Software	190.0	TLB (Cov-lite)	L+375bp	8-Aug-26	6.07%	0.00%	Y	B2/B	Technology	Refinancing
24-Oct	Upstream Rehabilitation	555.0	1st Lien TL (Cov-lite)	L+450bp	22-Oct-26	6.82%	0.00%	Y	B2/B	Healthcare	Acquisition
24-Oct	Upstream Rehabilitation	140.0	2nd Lien TL (Cov-lite)	L+850bp	22-Oct-27	11.19%	0.00%	Y	Caa1/CCC+	Healthcare	Acquisition
20-Nov	USI	550.0	TLB (Cov-lite)	L+400bp	18-Nov-26	6.13%	0.00%	Y	B3/B	Financial	Refinancing
4-Apr	Utopia Pipeline	25.0	TLB (Cov-lite)	L+425bp	4-Oct-24	6.98%	1.00%	Y	NR/NR	Energy	Dividend
27-Jun	Vast Broadband	237.5	TLB	L+450bp	31-Jul-26	7.08%	0.00%	N	B3/B	Telecom	Acquisition
20-Jun	Ventia	359.0	1st Lien TL (Cov-lite)	L+350bp	15-May-26	6.23%	1.00%	Y	Ba2/BB+	Services	Refinancing
6-May	VeriFone	425.0	1st Lien TL (Cov-lite)	L+400bp	25-Aug-25	6.83%	0.00%	Y	B2/B	Technology	Refinancing
26-Jul	Veritext	50.0	TLB (Cov-lite)	L+375bp	24-Jul-25	6.25%	0.00%	Y	B3/B	Services	Refinancing
23-May	Vertafore	170.0	1st Lien TL (Cov-lite)	L+325bp	29-Jul-25	6.46%	0.00%	Y	B3/B-	Technology	Acquisition
10-Jun	Victory Capital Management	1,100.0	TLB (Cov-lite)	L+325bp	8-Jun-26	5.94%	0.00%	Y	Ba3/BB-	Financial	Acquisition
2-Oct	Vida Capital	275.0	1st Lien TL (Cov-lite)	L+600bp	30-Sep-26	8.75%	0.00%	Y	B2/B	Financial	Acquisition
19-Sep	Vigor Industrial/MHI Holdings	500.0	TLB (Cov-lite)	L+500bp	17-Sep-26	7.41%	0.00%	Y	B2/B	Transportation	Acquisition
7-Oct	Virgin Media	3,300.0	TLN (Cov-lite)	L+250bp	1-Jan-28	4.72%	0.00%	Y	Ba3/BB-	Cable/Satellite	Refinancing
16-Sep	Virtu Financial	525.0	TLB (Cov-lite)	L+350bp	21-Apr-26	5.83%	0.00%	Y	Ba3/B+	Financial	Refinancing
30-Jan	Virtu Financial	1,500.0	1st Lien TL (Cov-lite)	L+350bp	28-Jan-26	6.38%	0.00%	Y	Ba3/B+	Financial	Acquisition
19-Nov	Vision Integrated Graphics Group	75.0	1st Lien TL	L+625bp	30-Jul-25	9.08%	1.00%	N	NR/NR	Technology	Acquisition
14-Nov	Vistra Operations Company	2,700.0	TLB (Cov-lite)	L+175bp	17-Dec-25	3.71%	0.00%	Y	Ba2/BB	Utility	Repricing

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
26-Jun	Vitech Systems Group	100.5	1st Lien TL	L+400bp	24-Jun-26	6.83%	0.00%	N	NR/NR	Technology	Acquisition
17-Apr	Vizient	500.0	TLB (Cov-lite)	L+275bp	15-Apr-26	5.47%	0.00%	Y	B1/BB-	Healthcare	Refinancing
25-Sep	Vungle	315.0	1st Lien TL (Cov-lite)	L+550bp	23-Sep-26	8.14%	0.00%	Y	B2/B	Diversified Media	Acquisition
11-Dec	Walker & Dunlop	298.0	TLB	L+200bp	9-Dec-25	3.89%	0.00%	N	Ba1/BB	Financial	Refinancing
18-Jun	WaterBridge Midstream	1,000.0	TLB	L+575bp	12-Jun-26	9.06%	1.00%	N	B1/B	Energy	Refinancing
30-Jul	Wawona & Gerawan	335.0	1st Lien TL (Cov-lite)	L+475bp	28-Jul-26	7.48%	0.00%	Y	B2/B	Food/Beverages	Acquisition
19-Sep	Waystar	825.0	TLB (Cov-lite)	L+400bp	17-Sep-26	6.29%	0.00%	Y	B3/B-	Healthcare	Acquisition
25-Nov	Waystar	100.0	TLB (Cov-lite)	L+400bp	20-Nov-26	6.36%	0.00%	Y	B3/B-	Healthcare	Acquisition
10-May	Weir Flow Control	180.0	TLB	L+600bp	8-May-26	9.32%	1.00%	N	B3/B	Industrials	Acquisition
10-May	Weir Flow Control	70.0	TLC	L+600bp	8-May-26	9.32%	1.00%	N	B3/B	Industrials	Acquisition
23-Sep	Wells Enterprises	185.0	TLB (Cov-lite)	L+300bp	22-Mar-25	5.25%	0.00%	Y	Ba3/BB-	Food/Beverages	Acquisition
8-May	Wells Enterprises	100.0	1st Lien TL (Cov-lite)	L+275bp	6-May-25	5.39%	0.00%	Y	Ba3/BB-	Food/Beverages	Acquisition
13-Jun	Wencor	405.0	1st Lien TL (Cov-lite)	L+425bp	11-Jun-26	6.93%	0.00%	Y	B3/B-	Industrials	Refinancing
13-Jun	Wencor	125.0	2nd lien TL (Cov-lite)	L+800bp	11-Jun-27	10.81%	0.00%	Y	B3/B-	Industrials	Refinancing
30-Jul	West Deptford Energy Holdings	445.0	1st Lien TL	L+375bp	28-Jul-26	6.33%	0.00%	N	Ba3/BB-	Utility	Dividend
25-Jun	Westinghouse Electric Company	330.0	1st Lien TL (Cov-lite)	L+350bp	4-Sep-25	6.12%	0.75%	Y	B2/B	Utility	Refinancing
7-Aug	WestJet Airlines	1,955.0	1st Lien TL	L+300bp	5-Aug-26	5.31%	1.00%	N	Ba3/B+	Transportation	Acquisition
14-May	WEX	1,468.0	1st Lien TL (Cov-lite)	L+225bp	12-May-26	4.97%	0.00%	Y	Ba3/BB-	Services	Refinancing
19-Jul	Whataburger	1,330.0	1st Lien TL (Cov-lite)	L+325bp	17-Jul-26	5.73%	0.00%	Y	B1/B	Food/Beverages	Acquisition
14-May	Wheel Pros	326.0	1st Lien TL (Cov-lite)	L+475bp	8-May-25	7.53%	0.00%	Y	B3/B	Automotive	Acquisition
23-Apr	Whisps	60.0	1st Lien TL	L+600bp	21-Apr-25	9.37%	1.00%	N	NR/NR	Industrials	Acquisition
14-May	Wilsonart	100.0	1st Lien TL (Cov-lite)	L+325bp	22-Dec-23	5.93%	1.00%	Y	B2/B+	Housing	Refinancing
8-Mar	Windstream Services	500.0	DIP-TL	L+250bp	7-Mar-21	5.23%	None	N	NR/NR	Telecom	DIP/Exit
16-Dec	WIRB-Copernicus Group	920.0	1st Lien TL (Cov-lite)	L+400bp	11-Dec-26	6.23%	1.00%	Y	B3/B	Services	Acquisition
12-Aug	World Triathlon	275.0	1st Lien TL (Cov-lite)	L+425bp	10-Aug-26	6.78%	1.00%	Y	B2/B	Gaming/Leisure	Refinancing
28-Oct	WorldStrides	50.0	TLB (Cov-lite)	L+425bp	1-Dec-24	6.65%	1.00%	Y	B2/B-	Gaming/Leisure	Acquisition
31-May	Worley Claims Services	300.0	1st Lien TL (Cov-lite)	L+400bp	29-May-26	6.77%	0.00%	Y	B3/B	Financial	Acquisition
31-May	Worley Claims Services	30.0	DD-1st Lien TL (Cov-lite)	L+400bp	30-May-21	6.77%	0.00%	Y	B3/B	Financial	Acquisition
22-Aug	WS Audiology	75.0	TLB (Cov-lite)	L+375bp	18-Feb-26	6.37%	0.00%	Y	B2/B+	Healthcare	Acquisition
7-Mar	Wynn Resorts	250.0	TLB (Cov-lite)	L+225bp	1-Oct-24	5.34%	0.00%	Y	Ba3/BB-	Gaming/Leisure	General Corporate
14-Mar	XPO Logistics	500.0	1st Lien TL (Cov-lite)	L+250bp	21-Feb-25	5.30%	0.00%	Y	Ba2/BB	Services	General Corporate

Source: J.P. Morgan.

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2019 US dollar new loans
Sorted by issuer

Date	Borrower	Amount ($ mn)	Security	Coupon	Maturity	Issuance Yield	Libor Floor	Cov-Lite	Ratings	Industry	Use of proceeds
27-Sep	ZelisRedCard	1,500.0	TLB (Cov-lite)	L+475bp	25-Sep-26	7.24%	0.00%	Y	B2/B	Healthcare	Acquisition
	Total:	**391,570.1**	**Average:**	**L+422bp**	**31-Aug-25**	**6.91%**					

Source: J.P. Morgan.

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2019 high-yield bond for loan issuance
Sorted by issuer

Date	Issuer	Amount ($ mn)	Proceeds ($ mn)	Security	Coupon %	Maturity	Issuance Yield %	Issuance Spread	Ratings	Sector	Use of proceeds
25-Apr	Adient US LLC	800.0	800.0	Sr Sec Nts	7.000	15-May-26	7.000	458bp	Ba2/BB-	Automotive	Repay bank debt
18-Sep	Advanced Drainage System	350.0	350.0	Sr Sec Nts	5.000	30-Sep-27	5.000	327bp	B1/B	Industrials	Repay bank debt
1-Aug	Albertsons	750.0	750.0	Sr Nts	5.875	15-Feb-28	5.875	422bp	B3/BB-	Retail	Repay bank debt
9-Dec	AMSTED Industries	400.0	400.0	Sr Nts	4.625	15-May-30	4.625	280bp	Ba3/BB	Industrials	Repay bank debt
20-Feb	Antero Midstream Partners LP	650.0	650.0	Sr Nts	5.750	1-Mar-27	5.750	316bp	Ba3/BB+	Energy	Repay bank debt
25-Jun	Antero Midstream Partners LP	650.0	650.0	Sr Nts	5.750	15-Jan-28	5.750	381bp	Ba3/BB+	Energy	Repay bank debt
16-Dec	Archrock Partners	500.0	500.0	Sr Nts	6.250	1-Apr-28	6.250	440bp	B2/B+	Energy	Repay bank debt
14-Nov	ASGN Inc	550.0	550.0	Sr Nts	4.625	15-May-28	4.625	285bp	Ba3/BB-	Technology	Repay bank debt
14-Feb	Avolon Holdings	800.0	800.0	Sr Nts	5.250	15-May-24	5.250	274bp	Ba2/BB+	Industrials	Repay bank debt
26-Apr	Brookfield Property REIT Inc	1,000.0	1,000.0	Sr Sec Nts	5.750	15-May-26	5.750	336bp	Ba3/BB+	Financial	Repay bank debt
13-Nov	Cascades Inc	300.0	300.0	Sr Nts	5.375	15-Jan-28	5.375	353bp	Ba3/BB-	Paper/Packaging	Repay bank debt
24-Jun	Catalent Pharma Solutions	500.0	500.0	Sr Nts	5.000	15-Jul-27	5.000	307bp	B3/B+	Healthcare	Repay bank debt
2-May	CDK Global Inc	500.0	500.0	Sr Nts	5.250	15-May-29	5.250	270bp	Ba1/BB+	Technology	Repay bank debt
12-Mar	Centennial Resource Production	500.0	496.2	Sr Nts	6.875	1-Apr-27	7.000	445bp	B3/BB-	Energy	Repay bank debt
21-Oct	Charles River Laboratories	500.0	500.0	Sr Nts	4.250	1-May-28	4.250	250bp	Ba3/BB	Healthcare	Repay bank debt
28-Feb	Community Health Systems	1,600.8	1,579.7	Sr Sec Nts	8.000	15-Mar-26	8.250	563bp	Caa1/B-	Healthcare	Repay bank debt
22-Nov	Compass Minerals	500.0	500.0	Sr Nts	6.750	1-Dec-27	6.750	504bp	B1/B+	Chemicals	Repay bank debt
9-Dec	Credit Acceptance Corp	400.0	400.0	Sr Nts	5.125	31-Dec-24	5.125	344bp	Ba3/BB	Financial	Repay bank debt
11-Apr	Crestwood Midstream Partners	600.0	600.0	Sr Nts	5.625	1-May-27	5.625	317bp	B1/BB-	Energy	Repay bank debt
7-Feb	CSC Holdings	250.0	254.4	Sr Nts	6.500	1-Feb-29	6.218	361bp	Ba3/BB-	Cable/Satellite	Repay bank debt
12-Jun	Cumulus Media New Holdings	500.0	500.0	Sr Sec Nts (1st)	6.750	1-Jul-26	6.750	475bp	B2/B	Broadcasting	Repay bank debt
16-Jan	DCP Midstream Operating	325.0	327.4	Sr Nts	5.375	15-Jul-25	5.230	269bp	Ba2/BB	Energy	Repay bank debt
7-Mar	Digicel	600.0	600.0	Sr Nts	8.750	25-May-24	8.750	630bp	B1/B	Telecom	Repay bank debt
2-May	Drax Finco PLC	200.0	203.0	Sr Sec Nts (1st)	6.625	1-Nov-25	6.191	384bp	NR/BB+	Utility	Repay bank debt
2-May	EG Global Finance plc	750.0	750.0	Sr Sec Nts (1st)	6.750	7-Feb-25	6.750	438bp	B2/B	Retail	Repay bank debt
10-Dec	EnerSys	300.0	300.0	Sr Nts	4.375	15-Dec-27	4.375	260bp	Ba3/BB+	Industrials	Repay bank debt
10-Dec	Entercom Media	100.0	105.0	Sr Sec Nts (2nd)	6.500	1-May-27	5.661	388bp	B2/B-	Broadcasting	Repay bank debt
10-Dec	Enviva Partners LP	50.0	51.8	Sr Nts	6.500	15-Jan-26	5.496	374bp	B1/B+	Energy	Repay bank debt
10-Sep	Extended Stay America	750.0	750.0	Sr Nts	4.625	1-Oct-27	4.625	296bp	Ba3/BB-	Gaming/Leisure	Repay bank debt
3-Dec	Fair Isaac Corp	350.0	350.0	Sr Nts	4.000	15-Jun-28	4.000	232bp	Ba2/BB+	Technology	Repay bank debt
26-Jun	Fairstone Financial	300.0	298.4	Sr Nts	7.875	15-Jul-24	8.000	623bp	B1/B	Financial	Repay bank debt
5-Sep	FMG Resources August 2006 Pty Ltd	600.0	600.0	Sr Nts	4.500	15-Sep-27	4.500	289bp	Ba1/BB+	Metals/Mining	Repay bank debt

Source: J.P. Morgan.

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2019 high-yield bond for loan issuance
Sorted by issuer

Date	Issuer	Amount ($ mn)	Proceeds ($ mn)	Security	Coupon %	Maturity	Issuance Yield %	Issuance Spread	Ratings	Sector	Use of proceeds
12-Mar	Frontier Communications	1,650.0	1,650.0	Sr Sec Nts (1st)	8.000	1-Apr-27	8.000	545bp	B2/B	Telecom	Repay bank debt
20-Nov	Gates Global LLC	568.0	568.0	Sr Nts	6.250	15-Jan-26	6.250	458bp	Caa1/B	Industrials	Repay bank debt
17-Apr	GFL Environmental	600.0	600.0	Sr Nts	8.500	1-May-27	8.500	597bp	Caa2/CCC+	Services	Repay bank debt
9-Dec	GFL Environmental	275.0	278.1	Sr Nts	7.000	1-Jun-26	6.625	488bp	Caa2/CCC+	Services	Repay bank debt
11-Jun	Graphic Packaging Intl	300.0	300.0	Sr Nts	4.750	15-Jul-27	4.750	269bp	Ba2/BB+	Paper/Packaging	Repay bank debt
30-Jan	Greif Inc.	500.0	500.0	Sr Nts	6.500	1-Mar-27	6.500	382bp	Ba3/BB-	Paper/Packaging	Repay bank debt
25-Apr	Greystar Real Estate Partners LLC	90.0	89.6	Sr Sec Nts	5.750	1-Dec-25	5.841	342bp	B1/BB-	Financial	Repay bank debt
24-Jun	Herc Holdings Inc	1,200.0	1,200.0	Sr Nts	5.500	15-Jul-27	5.500	357bp	B3/B+	Services	Repay bank debt
25-Jun	Hexion	450.0	450.0	Sr Nts	7.875	15-Jul-27	7.875	593bp	B3/B-	Chemicals	Repay bank debt
10-Jun	Hilton Domestic Operating	1,000.0	1,000.0	Sr Nts	4.875	15-Jan-30	4.875	274bp	Ba2/BB+	Gaming/Leisure	Repay bank debt
19-Nov	Houghton Mifflin Harcourt Publishers	306.0	299.9	Sr Sec Nts	9.000	15-Feb-25	9.500	786bp	B3/B	Diversified Media	Repay bank debt
1-Aug	iHeartCommunications	750.0	750.0	Sr Sec Nts (1st)	5.250	15-Aug-27	5.250	342bp	B1/BB-	Broadcasting	Repay bank debt
18-Nov	iHeartCommunications	500.0	500.0	Sr Sec Nts	4.750	15-Jan-28	4.750	300bp	B1/BB-	Broadcasting	Repay bank debt
16-Sep	Installed Building Products	300.0	300.0	Sr Nts	5.750	1-Feb-28	5.750	395bp	B3/B+	Housing	Repay bank debt
7-May	IQVIA inc	1,100.0	1,100.0	Sr Nts	5.000	15-May-27	5.000	260bp	Ba3/BB	Healthcare	Repay bank debt
26-Nov	iStar Inc.	100.0	102.0	Sr Nts	4.750	1-Oct-24	4.289	268bp	Ba3/BB-	Financial	Repay bank debt
12-Dec	Korn Ferry	400.0	400.0	Sr Nts	4.625	15-Dec-27	4.625	277bp	Ba3/BB	Services	Repay bank debt
23-Jan	Lamar Media	250.0	255.0	Sr Nts	5.750	1-Feb-26	5.289	261bp	Ba2/BB	Broadcasting	Repay bank debt
24-Jan	Lions Gate Capital Holdings	550.0	550.0	Sr Nts	6.375	1-Feb-24	6.375	382bp	B2/B-	Diversified Media	Repay bank debt
3-Dec	Lithia Motors	400.0	400.0	Sr Nts	4.625	15-Dec-27	4.625	284bp	Ba2/BB	Automotive	Repay bank debt
7-Nov	LPL Holdings Inc	400.0	400.0	Sr Nts	4.625	13-Nov-27	4.625	276bp	B1/BB	Financial	Repay bank debt
8-Feb	Match Group Inc.	350.0	350.0	Sr Nts	5.625	15-Feb-29	5.625	299bp	Ba3/BB	Gaming/Leisure	Repay bank debt
19-Feb	MEDNAX Inc.	500.0	498.8	Sr Nts	6.250	15-Jan-27	6.289	370bp	Ba2/BBB-	Healthcare	Repay bank debt
26-Nov	Melco Resorts	900.0	900.0	Sr Nts	5.375	4-Dec-29	5.375	353bp	Ba2/BB	Gaming/Leisure	Repay bank debt
17-Apr	Melco Resorts	500.0	500.0	Sr Nts	5.250	26-Apr-26	5.250	275bp	Ba2/BB	Gaming/Leisure	Repay bank debt
8-May	MGM China Holdings Limited	750.0	750.0	Sr Nts	5.875	15-May-26	5.875	349bp	Ba3/BB-	Gaming/Leisure	Repay bank debt
8-May	MGM China Holdings Limited	750.0	750.0	Sr Nts	5.375	15-May-24	5.375	309bp	Ba3/BB-	Gaming/Leisure	Repay bank debt
22-Jan	MGM Growth Properties	750.0	750.0	Sr Nts	5.750	1-Feb-27	5.750	305bp	B1/BB-	Gaming/Leisure	Repay bank debt
6-Dec	Moog	500.0	500.0	Sr Nts	4.250	15-Dec-27	4.250	246bp	Ba3/BB	Industrials	Repay bank debt
11-Jul	MTS Systems	350.0	350.0	Sr Nts	5.750	15-Aug-27	5.750	374bp	B3/B+	Technology	Repay bank debt
11-Oct	OCI NV	700.0	700.0	Sr Sec Nts	3.125	1-Nov-24	3.125	366bp	Ba3/BB	Chemicals	Repay bank debt

Source: J.P. Morgan.

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2019 high-yield bond for loan issuance
Sorted by issuer

Date	Issuer	Amount ($ mn)	Proceeds ($ mn)	Security	Coupon %	Maturity	Issuance Yield %	Issuance Spread	Ratings	Sector	Use of proceeds
11-Jul	Olin Corp	750.0	750.0	Sr Nts	5.625	1-Aug-29	5.625	350bp	B2/BB-	Chemicals	Repay bank debt
14-Feb	Park Aerospace Holdings	300.0	304.1	Sr Nts	5.250	15-Aug-22	4.814	233bp	Ba2/BB+	Transportation	Repay bank debt
25-Jun	Parkland Fuel	500.0	500.0	Sr Nts	5.875	15-May-29	5.875	396bp	B1/BB	Energy	Repay bank debt
12-Sep	Patrik Industries	300.0	300.0	Sr Nts	7.500	15-Oct-27	7.500	576bp	B3/B+	Housing	Repay bank debt
14-Nov	Restaurant Brands	750.0	750.0	Sr Sec Nts (2nd)	4.375	15-Jan-28	4.375	262bp	B2/B+	Food/Beverages	Repay bank debt
5-Dec	Select Medical	675.0	715.5	Sr Nts	6.250	15-Aug-26	5.178	432bp	B3/B-	Healthcare	Repay bank debt
10-Sep	Sensata	450.0	450.0	Sr Nts	4.375	15-Feb-30	4.375	263bp	Ba3/BB+	Industrials	Repay bank debt
7-May	Service Corp	750.0	750.0	Sr Nts	5.125	1-Jun-29	5.125	267bp	Ba3/BB	Services	Repay bank debt
4-Nov	Silgan Holdings	400.0	400.0	Sr Nts	4.125	1-Feb-28	4.125	241bp	B3/BB-	Paper/Packaging	Repay bank debt
14-Mar	SS&C Technologies Inc	2,000.0	2,000.0	Sr Nts	5.500	30-Sep-27	5.500	291bp	B2/B+	Technology	Repay bank debt
21-Jun	Talen Energy Supply	470.0	470.0	Sr Sec Nts	6.625	15-Jan-28	6.625	462bp	Ba3/BB	Utility	Repay bank debt
13-Nov	Targa Resources Partners	1,000.0	1,000.0	Sr Nts	5.500	1-Mar-30	5.500	363bp	Ba3/BB	Energy	Repay bank debt
22-Nov	Telesat Canada	400.0	400.0	Sr Sec Nts	4.875	1-Jun-27	4.875	318bp	Ba3/BB-	Cable/Satellite	Repay bank debt
22-Jul	TPC Group	930.0	930.0	Sr Sec Nts	10.500	1-Aug-24	10.500	869bp	B2/B	Chemicals	Repay bank debt
3-May	Twin River Worldwide Holdings Inc	400.0	400.0	Sr Nts	6.750	1-Jun-27	6.750	802bp	B3/B	Gaming/Leisure	Repay bank debt
21-Feb	USA Compression Partners LP	750.0	750.0	Sr Nts	6.875	1-Sep-27	6.875	421bp	B3/B+	Energy	Repay bank debt
21-Nov	VICI Properties	1,250.0	1,250.0	Sr Nts	4.250	1-Dec-26	4.250	256bp	B1/BB	Gaming/Leisure	Repay bank debt
21-Nov	VICI Properties	1,000.0	1,000.0	Sr Nts	4.625	1-Dec-29	4.625	286bp	B1/BB	Gaming/Leisure	Repay bank debt
9-May	Williams Scotsman International	190.0	190.5	Sr Sec Nts	6.875	15-Aug-23	6.783	455bp	B3/B	Services	Repay bank debt
10-Dec	Wyndham Destinations	350.0	350.0	Sr Sec Nts	4.625	1-Mar-30	4.625	278bp	Ba2/BB-	Gaming/Leisure	Repay bank debt
10-Dec	Wynn Macau	1,000.0	1,000.0	Sr Nts	5.125	15-Dec-29	5.125	329bp	B1/BB-	Gaming/Leisure	Repay bank debt
12-Sep	Wynn Resorts	750.0	750.0	Sr Nts	5.125	1-Oct-29	5.125	335bp	B1/BB	Gaming/Leisure	Repay bank debt
19-Feb	XPO Logistics Inc	1,000.0	1,000.0	Sr Nts	6.750	15-Aug-24	6.750	429bp	Ba3/BB	Services	Repay bank debt
	Total:	**51,029.8**	**51,067.3**	**Average:**	**5.789**	**13-Feb-26**	**5.737**	**374bp**			

Source: J.P. Morgan.

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Defaults

2019 US high-yield bond and institutional loan defaults

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Default action	Industry
January					
SiTV	240.0	0.0	240.0	Missed interest payment	Broadcasting
Defaulted Debt :	**240.0**	**0.0**	**240.0**		
Number of Companies	**1**	**-**	**1**		
February					
Affinion Group	681.5	837.4	1,519.0	Missed interest payment	Services
Trident USA Health Services	0.0	216.2	216.2	Filed Chapter 11	Healthcare
Windstream	3,047.8	1,748.9	4,796.8	Filed Chapter 11	Telecommunications
Defaulted Debt :	**3,729.4**	**2,802.6**	**6,531.9**		
Number of Companies	**2**	**3**	**3**		
March					
Cloud Peak Energy	346.8	0.0	346.8	Missed interest payment	Metals and Mining
Crossmark Holdings	0.0	490.0	490.0	Missed interest payment	Diversified Media
CTI Foods Holding	0.0	462.6	462.6	Filed Chapter 11	Food and Beverages
Jones Energy	1,009.2	0.0	1,009.2	Missed interest payment	Energy
PHI Inc.	500.0	0.0	500.0	Filed Chapter 11	Energy
Vanguard Natural Resources	80.7	123.4	204.2	Filed Chapter 11	Energy
Defaulted Debt :	**1,936.7**	**1,076.0**	**3,012.7**		
Number of Companies	**4**	**3**	**6**		
April					
Bristow Group	751.5	0.0	751.5	Missed interest payment	Energy
Fusion Connect	0.0	575.9	575.9	Missed amortization payment	Telecommunications
Hexion	3,486.4	0.0	3,486.4	Filed Chapter 11	Chemicals
Monitronics International	585.0	1,072.5	1,657.5	Missed interest payment	Services
Southcross Energy Partners	0.0	429.1	429.1	Filed Chapter 11	Energy
SunGard Availability Services	425.0	800.7	1,225.7	Missed interest payment	Technology
Defaulted Debt :	**5,247.9**	**2,878.2**	**8,126.1**		
Number of Companies	**4**	**4**	**6**		
May					
Empire Generating	0.0	303.4	303.4	Filed Chapter 11	Utility
Sable Permian Resources	2,103.9	0.0	2,103.9	Missed interest payment	Energy
Sheridan Production Partners II	0.0	543.1	543.1	Missed interest payment	Energy
Defaulted Debt :	**2,103.9**	**846.6**	**2,950.4**		
Number of Companies	**1**	**2**	**3**		
June					
Joerns Healthcare	0.0	272.0	272.0	Filed Chapter 11	Healthcare
Legacy Reserves LP	342.8	339.8	682.6	Filed Chapter 11	Energy
Defaulted Debt :	**342.8**	**611.8**	**954.6**		
Number of Companies	**1**	**2**	**2**		

Sources: J.P. Morgan; Moody's Investors Service; S&P LCD.

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Defaults

2019 US high-yield bond and institutional loan defaults (continued)

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Default action	Industry
July					
Blackhawk Mining	0.0	916.3	916.3	Prepackaged Chapter 11	Metals and Mining
PES Holdings LLC	0.0	518.9	518.9	Filed Chapter 11	Energy
Sanchez Energy	2,250.0	0.0	2,250.0	Missed interest payment	Energy
Stearns Lending	183.0	0.0	183.0	Filed Chapter 11	Financial
Weatherford International	6,164.1	285.0	6,449.1	Filed Chapter 11	Energy
Defaulted Debt :	**8,597.1**	**1,720.2**	**10,317.3**		
Number of Companies	**3**	**3**	**5**		
August					
EP Energy	4,279.9	0.0	4,279.9	Missed interest payment	Energy
Halcon Resources	625.0	0.0	625.0	Filed Chapter 11	Energy
Defaulted Debt :	**4,904.9**	**0.0**	**4,904.9**		
Number of Companies	**2**	**-**	**2**		
September					
Alta Mesa Holdings	500.0	0.0	500.0	Filed Chapter 11	Energy
High Ridge Brands	250.0	0.0	250.0	Missed interest payment	Consumer Products
Defaulted Debt :	**750.0**	**0.0**	**750.0**		
Number of Companies	**2**	**-**	**2**		
October					
Acosta	800.0	1,967.4	2,767.4	Missed interest payment	Diversified Media
Deluxe Entertainment Services Group	0.0	772.8	772.8	Filed Chapter 11	Diversified Media
Foresight Energy	425.0	743.3	1,168.3	Missed interest payment	Metals and Mining
Key Energy	0.0	243.1	243.1	Missed interest payment	Energy
Murray Energy	814.1	1,726.6	2,540.7	Filed Chapter 11	Metals and Mining
Sheridan Production Partners I	0.0	439.2	439.2	Missed interest payment	Energy
Defaulted Debt :	**2,039.1**	**5,892.4**	**7,931.5**		
Number of Companies	**3**	**6**	**6**		
November					
Approach Resources	85.2	0.0	85.2	Filed Chapter 11	Energy
Dean Foods	700.0	0.0	700.0	Filed Chapter 11	Food and Beverages
McDermott International	1,300.0	2,231.8	3,531.8	Missed interest payment	Energy
Totes Isotoner	0.0	232.1	232.1	Missed interest payment	Retail
Defaulted Debt :	**2,085.2**	**2,463.9**	**4,549.1**		
Number of Companies	**3**	**2**	**4**		

Sources: J.P. Morgan; Moody's Investors Service; S&P LCD.

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Defaults

2019 US high-yield bond and institutional loan defaults (continued)

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Default action	Industry
December					
4L Technologies	0.0	644.1	644.1	Filed Chapter 11	Services
American Addiction Centers	0.0	264.6	264.6	Missed principal & interest pymts.	Healthcare
Tapstone Energy	300.0	0.0	300.0	Missed interest payment	Energy
Defaulted Debt :	**300.0**	**908.7**	**1,208.7**		
Number of Companies	**1**	**2**	**3**		
	Bonds	**Loans**	**Total**		
Total defaulted debt	32,277.0	19,200.3	51,477.3		
Total number of defaulted issuers	27	27	43		
Default rate (par weighted)	2.63%	1.64%	2.15%		
Default rate (issuer weighted)	3.15%	1.96%	na		

Sources: J.P. Morgan; Moody's Investors Service; S&P LCD.

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Defaults

High-yield defaults by year

Year	Amount ($ mn)	Number	Average default size ($ mn)	Default rate (par-weighted)	Default rate (issuer-weighted)
1975	320.0	8	40.0	1.60%	1.60%
1976	114.0	5	22.8	0.80%	0.80%
1977	430.0	8	53.8	1.67%	1.67%
1978	192.0	5	38.4	1.67%	1.67%
1979	31.0	2	15.5	0.40%	0.40%
1980	297.9	8	37.2	1.57%	1.62%
1981	119.7	10	12.0	0.42%	0.71%
1982	1,063.0	23	46.2	3.44%	3.57%
1983	588.0	17	34.6	1.62%	3.89%
1984	992.8	18	55.2	2.09%	3.39%
1985	2,549.7	23	110.9	3.84%	3.99%
1986	3,619.4	27	134.1	3.48%	5.81%
1987	10,272.5	28	366.9	6.87%	4.32%
1988	5,048.1	33	153.0	2.80%	3.53%
1989	15,055.4	49	307.3	7.20%	5.76%
1990	22,856.5	51	448.2	10.89%	9.74%
1991	22,002.4	62	354.9	11.54%	10.42%
1992	8,190.5	31	264.2	4.45%	5.16%
1993	4,681.1	20	234.1	2.33%	3.84%
1994	3,361.8	16	210.1	1.46%	2.63%
1995	7,216.5	37	195.0	2.82%	5.73%
1996	4,759.7	18	264.4	1.64%	2.36%
1997	5,239.2	26	201.5	1.45%	2.70%
1998	7,988.1	47	170.0	1.73%	3.95%
1999	22,013.0	86	256.0	4.10%	6.99%
2000	28,332.9	116	244.2	5.03%	9.69%
2001	55,985.5	138	405.7	9.13%	12.05%
2002	55,591.5	87	639.0	7.98%	8.67%
2003	24,921.9	61	408.6	3.32%	6.42%
2004	8,637.5	29	297.8	1.10%	2.91%
2005	22,857.0	21	1,088.4	2.81%	2.13%
2006	7,305.0	18	405.8	0.87%	1.88%
2007	3,244.2	11	294.9	0.38%	1.20%
2008	19,446.1	42	463.0	2.25%	4.94%
2009	94,635.7	70	1,351.9	10.27%	8.59%
2010	7,947.6	21	378.5	0.80%	2.37%
2011	18,463.0	21	879.2	1.73%	2.21%
2012	14,127.1	20	706.4	1.26%	2.03%
2013	8,046.8	21	383.2	0.68%	2.06%
2014	37,071.0	17	2,180.6	2.92%	1.62%
2015	23,563.7	29	812.5	1.80%	2.82%
2016	46,329.1	50	926.6	3.57%	5.20%
2017	16,674.4	23	725.0	1.28%	2.49%
2018	23,618.4	25	944.7	1.83%	2.78%
2019	32,277.0	27	1,195.4	2.63%	3.15%
25-yr avg.	**23,851.7**	**42**	**562.0**	**2.94%**	**4.28%**

Sources: JPMorgan; Moody's Investors Service; S&P LCD.

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Defaults

Institutional bank loan defaults by year

Year	Amount ($ mn)	Number	Average default size ($ mn)	Default rate (par-weighted)	Default rate (issuer-weighted)
1998	550.0	4	137.5	1.51%	2.12%
1999	3,220.0	9	357.8	4.17%	2.69%
2000	7,080.0	33	214.5	6.57%	8.23%
2001	8,120.0	26	312.3	6.30%	5.31%
2002	7,850.0	23	341.3	6.01%	4.45%
2003	3,040.0	12	253.3	2.25%	2.28%
2004	1,520.0	6	253.3	1.01%	1.12%
2005	5,850.0	11	531.8	3.02%	1.98%
2006	1,220.0	5	244.0	0.48%	0.79%
2007	1,223.5	3	407.8	0.24%	0.26%
2008	29,741.8	60	495.7	3.88%	5.10%
2009	90,090.3	93	988.9	12.78%	7.34%
2010	11,863.2	31	382.7	1.83%	2.62%
2011	2,420.9	10	242.1	0.41%	0.89%
2012	8,440.7	22	383.7	1.43%	2.17%
2013	11,112.7	13	854.8	1.67%	1.32%
2014	32,786.4	16	2,049.1	4.26%	1.49%
2015	14,143.8	21	673.5	1.69%	1.86%
2016	13,043.1	26	501.7	1.49%	2.27%
2017	17,469.7	24	727.9	1.84%	2.03%
2018	18,491.5	14	1,320.8	1.72%	1.09%
2019	19,200.3	27	711.1	1.64%	1.96%
22-yr avg.	**14,021.7**	**22**	**630.8**	**3.01%**	**2.70%**

Sources: JPMorgan; Moody's Investors Service; S&P LCD.

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Defaults

2019 US high-yield bond and institutional loan distressed exchanges

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Industry
January				
API Heat Transfer (ThermaSys)	0.0	231.9	231.9	Industrials
Defaulted Debt :	**0.0**	**231.9**	**231.9**	
Number of Companies	**1**	**-**	**1**	
February				
Hornbeck Offshore	142.6	0.0	142.6	Energy
One Call	258.0	0.0	258.0	Healthcare
Defaulted Debt :	**400.6**	**0.0**	**400.6**	
Number of Companies	**2**	**-**	**2**	
March				
Savers (Evergreen AcqCo)	0.0	669.0	669.0	Retail
Defaulted Debt :	**0.0**	**669.0**	**669.0**	
Number of Companies	**0**	**1**	**1**	
June				
Neiman Marcus	1,478.0	2,775.3	4,253.3	Retail
99 Cents Stores	143.0	146.0	289.0	Retail
Defaulted Debt :	**1,621.0**	**2,921.3**	**4,542.3**	
Number of Companies	**2**	**2**	**2**	
September				
Chesapeake Energy	510.1	0.0	510.1	Energy
Defaulted Debt :	**510.1**	**0.0**	**510.1**	
Number of Companies	**1**	**-**	**1**	
October				
Medical Depot	0.0	564.8	564.8	Healthcare
Rite Aid	141.6	0.0	141.6	Retail
syncreon Global	225.0	497.4	722.4	Services
Defaulted Debt :	**366.6**	**1,062.2**	**1,428.8**	
Number of Companies	**2**	**2**	**3**	
	Bonds	**Loans**	**Total**	
Total distressed exchanges	**2,898.3**	**4,884.4**	**7,782.7**	
Total number of distressed exchanges	**8**	**5**	**10**	
Default rate inc. distressed (par weighted)	**2.94%**	**2.18%**	**2.57%**	

Sources: J.P. Morgan; Moody's Investors Service; S&P LCD.

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Defaults

2019 high-yield bonds and institutional bank loan international defaults

(includes distressed exchanges)

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Industry	Country	Region
March						
Eithad Partners	1,200.0	0.0	1,200.0	Transportation	UAE	Middle East/Africa
Nyrstar Netherlands Holdings	949.5	0.0	949.5	Metals and Mining	Belgium	West. Europe
Defaulted Debt	**2,149.5**	**0.0**	**2,149.5**			
Number of companies	**2**					
April						
China Minsheng Inv. Group	450.0	0.0	450.0	Financial	China	Asia
Kangde Xin Comp. Material Group	300.0	0.0	300.0	Paper and Packaging	China	Asia
Senvion Holding GmbH	450.9	0.0	450.9	Utility	Germany	West. Europe
Defaulted Debt	**1,200.9**	**0.0**	**1,200.9**			
Number of companies	**3**					
May						
Elli Finance UK Plc	691.0	0.0	691.0	Healthcare	United Kingdom	West. Europe
New Cotai	813.2	0.0	813.2	Gaming/Lodging/Leisure	Hong Kong	Asia
New Look	1,291.7	0.0	1,291.7	Retail	United Kingdom	West. Europe
Rallye SA	1,035.2	0.0	1,035.2	Gaming/Lodging/Leisure	France	West. Europe
Defaulted Debt	**3,831.1**	**0.0**	**3,831.1**			
Number of companies	**4**					
June						
Cell C Pty	184.0	0.0	184.0	Telecommunications	South Africa	Middle East/Africa
Galapagos Holding	656.8	0.0	656.8	Industrials	Germany	West. Europe
Yasar Holdings	44.0	0.0	44.0	Food and Beverage	Turkey	East. Europe
Defaulted Debt	**884.8**	**0.0**	**884.8**			
Number of companies	**3**					
August						
Maxcom Telecommunications	103.4	0.0	103.4	Telecommunications	Mexico	Lat. America
Defaulted Debt	**103.4**	**0.0**	**103.4**			
Number of companies	**1**					
September						
Delta Merlin Dunia Textiles	300.0	0.0	300.0	Retail	Indonesia	Asia
GCX	350.0	0.0	350.0	Technology	India	Asia
Haikou Meilan Airport	200.0	0.0	200.0	Transportation	China	Asia
Lecta SA	653.8	0.0	653.8	Paper and Packaging	France	West. Europe
Thomas Cook Group	1,264.8	0.0	1,264.8	Services	United Kingdom	West. Europe
Defaulted Debt	**2,768.6**	**0.0**	**2,768.6**			
Number of companies	**5**					

Note: Includes USD, Euro, and Sterling denominated bonds and amounts are shown in USD-equivalent.
Source: Moody's Investors Service.

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Defaults

2019 high-yield bonds and institutional bank loan international defaults (continued)

(includes distressed exchanges)

Company	Bonds ($mn)	Loans ($mn)	Total ($mn)	Industry	Country	Region
December						
Officine Maccaferri	210.5	0.0	210.5	Industrials	Italy	West. Europe
Defaulted Debt	**210.5**	**0.0**	**210.5**			
Number of companies	**1**					
Total defaulted debt	**11,148.7**	**0.0**	**11,148.7**			
Total number of issuers	**19**					

Note: Includes USD, Euro, and Sterling denominated bonds and amounts are shown in USD-equivalent.
Source: Moody's Investors Service.

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
1-800 Contacts	486.3	Retail	Upgrade
Armstrong Holdings	243.1	Housing	Upgrade
Cole Haan	292.1	Consumer Prod.	Upgrade
Digital Room	212.4	Technology	Upgrade
Four Seasons Hotels	882.0	Gaming/Leisure	Upgrade
HCA Inc.	2,645.6	Healthcare	Upgrade
Healthport	574.5	Healthcare	Upgrade
National Vision Inc	364.3	Retail	Upgrade
Navistar International	1,983.0	Automotive	Upgrade
Ping Identity Corp	250.0	Technology	Upgrade
Post Holdings Inc	1,309.5	Food/Beverages	Upgrade
Science Applications Int'l. Corporation	1,047.4	Technology	Upgrade
Spencer Spirit Holdings	288.5	Retail	Upgrade
Academy Ltd	1,634.9	Retail	Downgrade
Akorn Inc	831.9	Healthcare	Downgrade
Crossmark Holdings	490.0	Diversified Media	Downgrade
CSC Holdings	6,211.3	Cable/Satellite	Downgrade
Deluxe Entertainment Services Group	784.0	Diversified Media	Downgrade
Emdeon Inc	4,908.8	Healthcare	Downgrade
EnergySolutions	646.8	Services	Downgrade
Exelon	833.6	Utility	Downgrade
GTT Communications Inc	1,761.2	Telecommunications	Downgrade
High Liner Foods	337.9	Food/Beverages	Downgrade
iEnergizer	48.5	Services	Downgrade
Insilco Holding	231.9	Industrials	Downgrade
IPC Systems	621.0	Telecommunications	Downgrade
Lago Resort & Casino	307.2	Gaming/Leisure	Downgrade
Leslie's Poolmart	825.8	Retail	Downgrade
MKS Instruments	348.5	Technology	Downgrade
Moxie Liberty	422.6	Utility	Downgrade
New Insight Holdings	943.0	Services	Downgrade
Output Services Group	392.7	Services	Downgrade
Owens & Minor	500.0	Healthcare	Downgrade
Pioneer Energy Services	175.0	Energy	Downgrade
Surgery Partners Inc	1,453.4	Healthcare	Downgrade
Transcendia	110.0	Chemicals	Downgrade
Transdigm	7,580.8	Industrials	Downgrade
Verdesian Life Sciences	168.4	Chemicals	Downgrade
January Upgrades : 13 borrowers	**10,578.8**		
January Downgrades : 25 borrowers	**32,568.9**		
Alera Group Holdings Inc	548.9	Financial	Upgrade
Univar	1,747.8	Chemicals	Upgrade
ABB CONCISE Optical Group	408.6	Consumer Prod.	Downgrade
Accuride	358.9	Automotive	Downgrade

Source: J.P. Morgan.

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Acosta	1,977.6	Diversified Media	Downgrade
Belfor USA Group	254.5	Services	Downgrade
Diplomat Pharmacy	322.0	Healthcare	Downgrade
Emerald Performance Materials	753.4	Chemicals	Downgrade
Genesys Telecom. Laboratories	1,564.3	Technology	Downgrade
Immucor Inc	647.1	Healthcare	Downgrade
Limetree Bay Terminals	456.9	Energy	Downgrade
Lucid Energy Group II	942.9	Energy	Downgrade
M/A-COM Technology	678.1	Industrials	Downgrade
MEG Energy Corp.	225.4	Energy	Downgrade
Multi-Color Corp	495.0	Paper/Packaging	Downgrade
NeuStar	1,425.5	Telecommunications	Downgrade
One Call Medical Inc	987.5	Healthcare	Downgrade
Outerstuff	148.4	Consumer Prod.	Downgrade
Powerteam Services	578.5	Utility	Downgrade
ProFrac Services	174.6	Industrials	Downgrade
Riverbed Technology	1,557.4	Technology	Downgrade
Robertshaw	616.2	Industrials	Downgrade
Sparta Systems	237.0	Technology	Downgrade
St. Joseph Energy Center	410.8	Utility	Downgrade
SunGard Availability Services	800.7	Technology	Downgrade
Terra-Gen Power LLC	253.1	Utility	Downgrade
Truck Hero	1,147.5	Automotive	Downgrade
Uniti Group	2,065.8	Financial	Downgrade
VIP Cinema Holdings	150.6	Gaming/Leisure	Downgrade
Western Generation Partners	219.3	Financial	Downgrade
Winebow Group	349.7	Food/Beverages	Downgrade
February Upgrades : 2 borrowers	**2,296.7**		
February Downgrades : 29 borrowers	**20,207.1**		
BJ's Wholesale Club Inc	1,530.0	Retail	Upgrade
Ceridian	676.6	Services	Upgrade
Churchill Downs Inc	395.0	Gaming/Leisure	Upgrade
Civitas Solutions	805.0	Healthcare	Upgrade
Conduent	830.9	Technology	Upgrade
Equitrans Midstream Corporation	598.5	Energy	Upgrade
Go Daddy Group	2,451.1	Technology	Upgrade
Lindblad Expeditions	158.8	Gaming/Leisure	Upgrade
Mediacom LLC/Capital	1,679.0	Cable/Satellite	Upgrade
Qlik Technologies	977.6	Technology	Upgrade
Restaurant Brands	6,321.5	Food/Beverages	Upgrade
SS&C Technologies	6,161.1	Technology	Upgrade
TPF II LC	1,093.3	Utility	Upgrade
TriNet HR Corp	408.5	Services	Upgrade
Warner Music Group	1,326.0	Diversified Media	Upgrade

Source: J.P. Morgan.

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Abaco Energy Technologies	144.6	Energy	Downgrade
Advanced Integration Technology	324.3	Industrials	Downgrade
Affordable Care	504.9	Healthcare	Downgrade
American Addiction Centers	263.8	Healthcare	Downgrade
Arbor Pharmaceuticals	462.5	Healthcare	Downgrade
Ascena Retail Group	1,371.5	Retail	Downgrade
Camping World	1,172.1	Retail	Downgrade
Casa Systems	294.0	Technology	Downgrade
CIBT Holdings	529.9	Gaming/Leisure	Downgrade
Clubcorp Club Operations	1,150.6	Gaming/Leisure	Downgrade
Consolidated Communications	1,798.5	Telecommunications	Downgrade
Endo Health Solutions	3,355.2	Healthcare	Downgrade
EW Scripps	295.5	Diversified Media	Downgrade
Flavors Holdings	321.3	Food/Beverages	Downgrade
Hornblower	326.7	Gaming/Leisure	Downgrade
Infogroup	245.0	Diversified Media	Downgrade
J. Crew	1,342.1	Retail	Downgrade
JC Penney	1,572.1	Retail	Downgrade
LegalShield	150.0	Services	Downgrade
Lifetime Brands	272.3	Consumer Prod.	Downgrade
McDermott International	2,237.4	Energy	Downgrade
MDA	1,975.0	Cable/Satellite	Downgrade
Murray Energy	1,730.9	Metals/Mining	Downgrade
MW Industries	603.2	Industrials	Downgrade
Neiman Marcus Group	2,795.5	Retail	Downgrade
Pier 1 Imports	190.5	Retail	Downgrade
Precyse Solutions	549.7	Healthcare	Downgrade
Premiere Global Services	569.0	Technology	Downgrade
Prospect Medical	1,111.6	Healthcare	Downgrade
Quorum Health Group	789.4	Healthcare	Downgrade
Rovi Corp	621.9	Diversified Media	Downgrade
Save-A-Lot	723.4	Retail	Downgrade
Serta Simmons Holdings	2,338.2	Consumer Prod.	Downgrade
Strategic Materials	312.1	Services	Downgrade
syncreon Global	497.4	Services	Downgrade
Syneos Health	1,196.0	Healthcare	Downgrade
Vyaire Medical	357.3	Healthcare	Downgrade
March Upgrades : 15 borrowers	**25,412.8**		
March Downgrades : 37 borrowers	**34,495.3**		
CBS Radio Inc	866.7	Broadcasting	Upgrade
GFL Environmental Inc	2,599.9	Services	Upgrade
G-III Apparel Group	300.0	Consumer Prod.	Upgrade
GrafTech International Ltd	2,068.8	Industrials	Upgrade
Kinetic Concepts	1,066.0	Healthcare	Upgrade

Source: J.P. Morgan.

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
PQ Corp	1,157.5	Chemicals	Upgrade
Quebecor Media	330.8	Cable/Satellite	Upgrade
US LBM Holdings	992.5	Housing	Upgrade
Advantage Sales & Marketing	3,246.9	Diversified Media	Downgrade
Air Methods	1,228.1	Healthcare	Downgrade
American Comm. Lines LLC/ACL Capital	977.5	Transportation	Downgrade
APX Group	806.0	Services	Downgrade
Cable One Inc	491.3	Cable/Satellite	Downgrade
Checkers Drive-In Restaurants	189.1	Food/Beverages	Downgrade
Cologix	488.4	Technology	Downgrade
CSM Bakery Supplies	657.9	Food/Beverages	Downgrade
Cyxtera Technologies	1,110.7	Technology	Downgrade
Diamond Resorts	880.6	Gaming/Leisure	Downgrade
EIG Global Energy Partners	217.8	Financial	Downgrade
Fusion Telecommunications International	575.9	Telecommunications	Downgrade
Global Eagle Entertainment	475.0	Diversified Media	Downgrade
Global Knowledge Training	217.6	Services	Downgrade
Harland Clarke Holdings	1,639.0	Diversified Media	Downgrade
Imagine! Print Solutions	490.9	Services	Downgrade
Insight Global Inc	1,076.9	Services	Downgrade
Mallinckrodt International Finance	1,934.2	Healthcare	Downgrade
Millennium Health	561.5	Healthcare	Downgrade
Monitronics International	1,072.5	Services	Downgrade
Mortgage Contracting Services	437.3	Services	Downgrade
NPC International	754.6	Food/Beverages	Downgrade
Parq Resort & Casino	286.3	Gaming/Leisure	Downgrade
Progrexion	433.8	Services	Downgrade
Rodan & Fields	595.5	Consumer Prod.	Downgrade
Securus Technologies	1,664.9	Services	Downgrade
Sheridan Production Partners	456.0	Energy	Downgrade
Steak N Shake Operations	183.1	Food/Beverages	Downgrade
Systems Maintenance Services	518.1	Technology	Downgrade
TriMark USA	576.3	Services	Downgrade
Triton Solar	301.2	Technology	Downgrade
Vertiv	2,070.0	Industrials	Downgrade
Zep	716.8	Chemicals	Downgrade
April Upgrades : 8 borrowers	**9,382.1**		
April Downgrades : 33 borrowers	**27,331.7**		
Albaugh	345.6	Chemicals	Upgrade
Alion Science and Technology	406.9	Industrials	Upgrade
Aretec Group	1,012.9	Financial	Upgrade
Avantor Inc	809.8	Healthcare	Upgrade
Builders FirstSource	157.1	Housing	Upgrade
Crosby Worldwide	620.6	Industrials	Upgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Cypress Semiconductor	448.8	Technology	Upgrade
Distribution International	206.3	Industrials	Upgrade
DXP Enterprises	246.3	Services	Upgrade
Greatbatch	601.3	Healthcare	Upgrade
Hearthside Food Solutions	1,136.4	Food/Beverages	Upgrade
Infiltrator Systems	334.5	Services	Upgrade
Inovalon	972.7	Technology	Upgrade
Lands' End	389.3	Retail	Upgrade
Lineage Logistics	733.5	Food/Beverages	Upgrade
Momentive Performance	750.0	Chemicals	Upgrade
Red Ventures	1,875.6	Diversified Media	Upgrade
SBP Holdings	341.2	Industrials	Upgrade
Seaworld Parks & Entertainment	1,519.5	Gaming/Leisure	Upgrade
Thomson Reuters IP&S	850.2	Services	Upgrade
Wynn Resorts Ltd	748.1	Gaming/Leisure	Upgrade
ABC Financial Services	257.4	Technology	Downgrade
Allnex	896.6	Chemicals	Downgrade
ALM Media	237.5	Diversified Media	Downgrade
APC Aftermarket	308.7	Automotive	Downgrade
Apex Tool Group	880.1	Industrials	Downgrade
Bison Midstream Holdings	893.3	Energy	Downgrade
Brand Industrial Service	2,775.6	Services	Downgrade
Caprock Midstream	690.0	Energy	Downgrade
Catalent Pharma Solutions	479.0	Healthcare	Downgrade
Commscope	3,200.0	Technology	Downgrade
Constellis Holdings	1,072.2	Services	Downgrade
Cooper Standard Automotive	332.4	Automotive	Downgrade
Covia	1,637.6	Energy	Downgrade
DBP Holding	238.8	Retail	Downgrade
Exela Technologies	396.3	Services	Downgrade
Gavilan Resources	450.0	Energy	Downgrade
Goodyear Tire & Rubber	400.0	Automotive	Downgrade
Healogics	720.8	Healthcare	Downgrade
K&N Engineering	338.7	Industrials	Downgrade
KIK Custom Products	919.4	Consumer Prod.	Downgrade
LifeMiles	431.5	Transportation	Downgrade
McGraw-Hill Global Education	1,665.3	Diversified Media	Downgrade
MoneyGram Payment Systems	901.9	Services	Downgrade
Novolex	2,907.5	Paper/Packaging	Downgrade
Parexel International	1,934.0	Healthcare	Downgrade
Powerteam Services	135.0	Utility	Downgrade
Sheridan Production Partners	362.9	Energy	Downgrade
SkillSoft	1,970.1	Technology	Downgrade
Sprint Industrial Holdings	102.1	Services	Downgrade
Syniverse Technologies	1,905.0	Technology	Downgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Talen Energy Supply	973.5	Utility	Downgrade
Totes Isotoner	232.3	Retail	Downgrade
Utz Quality Foods	653.3	Food/Beverages	Downgrade
Verifone	1,741.3	Technology	Downgrade
Victory Capital Management	280.0	Financial	Downgrade
Wall Street Systems	245.0	Technology	Downgrade
Weatherford International	297.5	Energy	Downgrade
West Corp	3,220.2	Telecommunications	Downgrade
Wheel Pros LLC	70.0	Automotive	Downgrade
May Upgrades : 21 borrowers	**14,506.4**		
May Downgrades : 39 borrowers	**37,153.0**		
Achilles Acquisition LLC	458.9	Financial	Upgrade
Advanced Computer Software Group	336.5	Technology	Upgrade
Albertsons Holdings LLC	4,670.6	Retail	Upgrade
Cumulus Media	603.7	Broadcasting	Upgrade
FleetCor Technologies Operating Company	343.9	Services	Upgrade
Foundation Building Materials	447.8	Housing	Upgrade
GIM Channelview Cogeneration	249.8	Utility	Upgrade
Grocery Outlet Inc	475.2	Retail	Upgrade
Harsco Corp	539.1	Industrials	Upgrade
Infor US Inc	2,098.8	Technology	Upgrade
KAR Auction Services	455.5	Automotive	Upgrade
Keane Group	346.5	Energy	Upgrade
Longview Power	288.0	Utility	Upgrade
LPL Holdings Inc	1,473.8	Financial	Upgrade
Merrill Corporation	167.4	Diversified Media	Upgrade
NMI Holdings	148.5	Financial	Upgrade
OCI Beaumont	449.3	Chemicals	Upgrade
PetSmart	3,226.3	Retail	Upgrade
Rexnord	725.0	Industrials	Upgrade
TurboCombustor Technology	245.7	Industrials	Upgrade
Verint Systems	416.5	Technology	Upgrade
Affinity Gaming	473.0	Gaming/Leisure	Downgrade
AgroFresh	408.0	Food/Beverages	Downgrade
Albany Molecular Research	848.5	Healthcare	Downgrade
Alliance Healthcare Services	509.8	Healthcare	Downgrade
Arcade/Bioplan	248.2	Paper/Packaging	Downgrade
Belcan	470.8	Services	Downgrade
Belk	1,074.0	Retail	Downgrade
Caesars Entertainment	1,477.5	Gaming/Leisure	Downgrade
Compuware	472.6	Technology	Downgrade
Consolidated Container Holdings	594.4	Paper/Packaging	Downgrade
Cypress Performance Group	461.7	Chemicals	Downgrade
Diversey	886.5	Services	Downgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Drive DeVilbiss	564.8	Healthcare	Downgrade
Dunn Paper	328.8	Paper/Packaging	Downgrade
EagleView Technology	762.3	Technology	Downgrade
Electrical Components International	692.2	Industrials	Downgrade
Ennis-Flint	473.6	Chemicals	Downgrade
Epiq Systems	1,146.4	Technology	Downgrade
Foresight Energy	743.3	Metals/Mining	Downgrade
Frontier Communications	1,707.6	Telecommunications	Downgrade
J. Jill Group	244.7	Retail	Downgrade
Jason Incorporated	380.9	Automotive	Downgrade
LSC Communications Inc	243.1	Diversified Media	Downgrade
McAfee	3,079.3	Technology	Downgrade
Mission Broadcasting	227.4	Broadcasting	Downgrade
Nellson Nutraceutical	378.3	Healthcare	Downgrade
Nexstar Broadcasting	1,138.6	Broadcasting	Downgrade
NN Inc	802.2	Industrials	Downgrade
NorthStar Financial Services Group	318.2	Financial	Downgrade
Quality Distribution	518.6	Transportation	Downgrade
SGS International	671.6	Diversified Media	Downgrade
SnapAV	290.2	Consumer Prod.	Downgrade
Spectrum Plastics	624.3	Paper/Packaging	Downgrade
Tenneco Automotive	1,691.5	Automotive	Downgrade
TOMS Shoes	293.5	Consumer Prod.	Downgrade
U.S. Silica	1,264.0	Metals/Mining	Downgrade
June Upgrades : 21 borrowers	**18,166.5**		
June Downgrades : 36 borrowers	**26,510.3**		
Brooks Automation	50.0	Technology	Upgrade
DTZ	2,679.8	Financial	Upgrade
EmployBridge	461.0	Services	Upgrade
EW Scripps	763.1	Broadcasting	Upgrade
HD Supply	1,062.0	Housing	Upgrade
Liquidnet Holdings	170.0	Financial	Upgrade
MTS Systems	174.8	Technology	Upgrade
naviHealth	421.8	Technology	Upgrade
Osum Production	17.9	Energy	Upgrade
SRAM	367.0	Consumer Prod.	Upgrade
YRC Worldwide Inc	558.1	Transportation	Upgrade
4L Technologies	646.0	Services	Downgrade
Aegis Toxicology	297.8	Healthcare	Downgrade
Alcami Carolinas	235.7	Healthcare	Downgrade
Amneal Pharmaceuticals	2,672.4	Healthcare	Downgrade
Anastasia Beverly Hills	645.1	Consumer Prod.	Downgrade
Ball Metalpack Finco	536.1	Paper/Packaging	Downgrade
California Pizza Kitchen Inc	357.0	Food/Beverages	Downgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
CareerBuilder	285.6	Services	Downgrade
Coty	1,386.0	Consumer Prod.	Downgrade
Dayco Products	465.3	Automotive	Downgrade
Glass Mountain Pipeline	296.3	Energy	Downgrade
Houghton International	625.4	Chemicals	Downgrade
Hunterstown	445.6	Utility	Downgrade
Isagenix International LLC	356.3	Retail	Downgrade
Janus International Group	464.1	Housing	Downgrade
KDC	522.4	Consumer Prod.	Downgrade
Kenan Advantage Group	962.1	Transportation	Downgrade
Life Time Fitness Inc	1,494.4	Gaming/Leisure	Downgrade
MedPlast Holdings Inc	721.3	Healthcare	Downgrade
Sinclair Broadcast	1,335.8	Broadcasting	Downgrade
TPF Generation Holdings	262.6	Utility	Downgrade
July Upgrades : 11 borrowers	**6,725.4**		
July Downgrades : 21 borrowers	**15,013.0**		
AssetMark Financial Holdings	123.8	Financial	Upgrade
Lightstone Generation	1,873.0	Utility	Upgrade
Paradigm Energy Partners	390.0	Energy	Upgrade
WEX Inc	1,464.4	Services	Upgrade
Alorica	281.3	Services	Downgrade
Alvogen Pharma	958.8	Healthcare	Downgrade
Beacon Roofing Supply	957.9	Housing	Downgrade
Chief Power Finance	320.2	Utility	Downgrade
CRGT	373.0	Technology	Downgrade
Imagine! Print Solutions	399.9	Services	Downgrade
Internap Network Services	427.9	Technology	Downgrade
Kellermeyer Bergensons Services	55.0	Services	Downgrade
NEP Broadcasting	1,364.4	Broadcasting	Downgrade
Optiv Security	987.2	Technology	Downgrade
Pabst Brewing	457.8	Food/Beverages	Downgrade
Patterson Medical	869.2	Healthcare	Downgrade
Prince Mineral Holding	658.6	Metals/Mining	Downgrade
Realogy	1,063.8	Housing	Downgrade
Trilliant Food and Nutrition	290.1	Food/Beverages	Downgrade
TriTech Software Systems	1,330.2	Technology	Downgrade
US Foods	2,134.0	Food/Beverages	Downgrade
Visteon	350.0	Automotive	Downgrade
August Upgrades : 4 borrowers	**3,851.1**		
August Downgrades : 18 borrowers	**13,279.2**		
Air Canada	592.0	Transportation	Upgrade
Ciena Corp	694.8	Technology	Upgrade
Cole Haan	286.4	Consumer Prod.	Upgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Encino Acquisition Partners Holdings	550.0	Energy	Upgrade
First Advantage	551.9	Services	Upgrade
Herbalife Ltd	742.5	Food/Beverages	Upgrade
Installed Building Products	200.0	Housing	Upgrade
L&W Group	444.4	Automotive	Upgrade
Leidos Holdings Inc	1,095.0	Services	Upgrade
Marriott Ownership Resorts Inc	893.3	Gaming/Leisure	Upgrade
Transplace	527.5	Services	Upgrade
Acosta	1,967.4	Diversified Media	Downgrade
American Renal Holdings	430.1	Healthcare	Downgrade
Anchor Glass Container	782.2	Paper/Packaging	Downgrade
Arctic Glacier USA	412.5	Food/Beverages	Downgrade
Bluestem Brands	413.8	Retail	Downgrade
Britax US Holding	248.5	Consumer Prod.	Downgrade
Chobani	797.3	Food/Beverages	Downgrade
Cohu Inc	346.5	Technology	Downgrade
Coinmach	1,728.7	Services	Downgrade
Communications & Power Industries	460.6	Industrials	Downgrade
CPM Holdings	736.0	Industrials	Downgrade
Culligan International Company	1,259.6	Services	Downgrade
Deluxe Entertainment Services Group	772.8	Diversified Media	Downgrade
Dynacast International	1,069.7	Industrials	Downgrade
Envision Healthcare	5,409.1	Healthcare	Downgrade
Eton	416.1	Services	Downgrade
FTS International Inc	90.0	Energy	Downgrade
International Textile Group	691.7	Consumer Prod.	Downgrade
ION Trading Technologies	1,554.0	Technology	Downgrade
Jo-Ann Stores	1,072.8	Retail	Downgrade
Jordan Health Services	846.8	Healthcare	Downgrade
LifeScan Global Corp	1,397.6	Healthcare	Downgrade
Material Handling Services	619.2	Industrials	Downgrade
Moxie Liberty	419.4	Utility	Downgrade
NBG Home	281.3	Consumer Prod.	Downgrade
Outerstuff	147.3	Consumer Prod.	Downgrade
Panda Power Funds	350.4	Utility	Downgrade
Pinnacle Operating Corp	321.5	Chemicals	Downgrade
PLH Group Inc	132.3	Utility	Downgrade
Priority Payments	389.8	Services	Downgrade
Renfro	144.6	Consumer Prod.	Downgrade
Shape Technologies	296.3	Industrials	Downgrade
Tailored Brands	883.9	Retail	Downgrade
Thor Industries	1,008.5	Consumer Prod.	Downgrade
Tradesmen International	386.9	Services	Downgrade
Ultra Petroleum Corp	971.2	Energy	Downgrade
Utex Industries Inc	715.7	Industrials	Downgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Varsity Brands	1,376.9	Consumer Prod.	Downgrade
VIP Cinema Holdings	144.4	Gaming/Leisure	Downgrade
Wells Enterprises	272.1	Food/Beverages	Downgrade
Zuffa	2,327.8	Gaming/Leisure	Downgrade
September Upgrades : 11 borrowers	6,577.7		
September Downgrades : 41 borrowers	34,093.0		
AmWINS Group Inc	1,556.8	Financial	Upgrade
Carestream Health	365.6	Healthcare	Upgrade
Gardner Denver	927.6	Industrials	Upgrade
Generac Power Systems	879.0	Industrials	Upgrade
Intrawest Resorts Holdings	1,685.9	Gaming/Leisure	Upgrade
IRB Holding Corp	2,566.1	Food/Beverages	Upgrade
KBR	758.0	Services	Upgrade
Ping Identity Corp	50.9	Technology	Upgrade
SBA Communications	2,370.0	Telecommunications	Upgrade
Walker & Dunlop	297.8	Financial	Upgrade
Winnebago	260.0	Automotive	Upgrade
Ascena Retail Group	1,371.5	Retail	Downgrade
Atkins Nutritionals	195.5	Food/Beverages	Downgrade
BMC Software	3,275.3	Technology	Downgrade
CIRCOR International	653.9	Industrials	Downgrade
Daseke	489.7	Transportation	Downgrade
Delek U.S. Holdings	938.3	Energy	Downgrade
Emerald Expositions Holdings	532.3	Diversified Media	Downgrade
GoodRx	534.9	Healthcare	Downgrade
GRD Holding III	336.0	Retail	Downgrade
Infoblox	736.7	Technology	Downgrade
Innovative Water Care	458.2	Services	Downgrade
Juice Plus+	427.5	Retail	Downgrade
LifeScan Global Corp	275.0	Healthcare	Downgrade
Logix Holding	235.6	Telecommunications	Downgrade
McDermott International	2,226.1	Energy	Downgrade
One Call Medical Inc	837.9	Healthcare	Downgrade
Peak 10 Inc	310.0	Technology	Downgrade
Plaskolite	655.1	Chemicals	Downgrade
Rackspace Hosting Inc	2,831.8	Technology	Downgrade
RentPath	651.0	Diversified Media	Downgrade
Save-A-Lot	719.7	Retail	Downgrade
Shoes for Crews	248.5	Consumer Prod.	Downgrade
Trinseo SA	686.0	Chemicals	Downgrade
U.S. Farathane	513.3	Automotive	Downgrade
United Natural Foods	1,791.0	Food/Beverages	Downgrade
USIC Holdings	755.4	Services	Downgrade
Worldstrides	537.0	Gaming/Leisure	Downgrade
October Upgrades : 11 borrowers	**11,717.6**		
October Downgrades : 27 borrowers	**23,223.1**		

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
American Rock Salt	397.0	Chemicals	Upgrade
Asurion Corporation	3,300.0	Services	Upgrade
Boyd Gaming	1,045.0	Gaming/Leisure	Upgrade
Cambium Learning	317.6	Services	Upgrade
Ducommun Inc	226.4	Industrials	Upgrade
Floor & Decor	145.5	Retail	Upgrade
Healthport	570.1	Healthcare	Upgrade
IEA	197.7	Industrials	Upgrade
Lannett	602.4	Healthcare	Upgrade
Universal Hospital Services	656.7	Healthcare	Upgrade
24 Hour Fitness Worldwide	839.4	Gaming/Leisure	Downgrade
8th Avenue Food and Provisions	621.1	Food/Beverages	Downgrade
American Addiction Centers	264.6	Healthcare	Downgrade
American Commercial Lines LLC/ACL Capital	948.8	Transportation	Downgrade
Apple Leisure	935.8	Gaming/Leisure	Downgrade
Array Canada	295.3	Services	Downgrade
Beasley Broadcasting Group	243.0	Broadcasting	Downgrade
Capco	245.0	Services	Downgrade
Casa Systems	291.8	Technology	Downgrade
Diplomat Pharmacy	317.8	Healthcare	Downgrade
Harland Clarke Holdings	1,589.0	Diversified Media	Downgrade
Horseshoe Gaming	294.0	Gaming/Leisure	Downgrade
Libbey Glass	376.9	Consumer Prod.	Downgrade
Mallinckrodt International Finance	1,924.4	Healthcare	Downgrade
MB Aerospace	250.5	Industrials	Downgrade
Party City Holdings Inc	727.0	Retail	Downgrade
Plantronics	1,146.8	Technology	Downgrade
Precyse Solutions	736.9	Healthcare	Downgrade
ProAmpac	1,579.6	Paper/Packaging	Downgrade
Progrexion	429.0	Services	Downgrade
Pure Fishing Inc	437.2	Consumer Prod.	Downgrade
Quorum Health Group	738.3	Healthcare	Downgrade
Rodan & Fields	592.5	Consumer Prod.	Downgrade
Scientific Games	4,111.9	Gaming/Leisure	Downgrade
SIRVA Worldwide	541.8	Transportation	Downgrade
TNT Crane & Rigging	628.5	Services	Downgrade
Town Sports International	178.2	Gaming/Leisure	Downgrade
Transaction Network Services	503.6	Services	Downgrade
Twin River Worldwide Holdings Inc	299.3	Gaming/Leisure	Downgrade
WASH Multifamily Laundry Systems	567.2	Services	Downgrade
November Upgrades : 10 borrowers	**7,458.4**		
November Downgrades : 30 borrowers	**22,655.1**		
Atkore International	852.1	Metals/Mining	Upgrade
Atlantic Power	380.0	Utility	Upgrade
Bausch Health Companies	5,144.4	Healthcare	Upgrade
Everi Payments	749.0	Gaming/Leisure	Upgrade

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Upgrades and downgrades

Borrower	Amt ($mn)	Industry	Upgrade/Downgrade
Grocery Outlet Inc	460.2	Retail	Upgrade
Integro	259.5	Financial	Upgrade
iStar Financial	491.9	Financial	Upgrade
LifeMiles	396.6	Transportation	Upgrade
RPX Corp	88.4	Services	Upgrade
SolarWinds Inc	1,950.2	Technology	Upgrade
Vistra Energy Corp	2,700.0	Utility	Upgrade
Accuride	355.3	Automotive	Downgrade
ATI Holdings	788.1	Healthcare	Downgrade
Chemours Co	884.3	Chemicals	Downgrade
Constellis Holdings	1,065.7	Services	Downgrade
GoWireless	270.0	Retail	Downgrade
Gulf Finance	1,067.3	Energy	Downgrade
Healogics	716.7	Healthcare	Downgrade
Imagine! Print Solutions	90.0	Services	Downgrade
Learfield Communications	920.3	Broadcasting	Downgrade
Limetree Bay Terminals	452.3	Energy	Downgrade
LTI Boyd Corp	1,723.4	Industrials	Downgrade
Michaels Stores	2,188.8	Retail	Downgrade
NeuStar	1,476.5	Telecommunications	Downgrade
Peabody Energy	393.0	Metals/Mining	Downgrade
Pioneer Energy Services	175.0	Energy	Downgrade
Robertshaw	611.1	Industrials	Downgrade
Serta Simmons Holdings	2,323.6	Consumer Prod.	Downgrade
Team Health	2,674.4	Healthcare	Downgrade
Triton Solar	295.5	Technology	Downgrade
December Upgrades : 11 borrowers	**13,472.2**		
December Downgrades : 19 borrowers	**18,471.0**		
Full-year 2019 Upgrades: 138 borrowers	**130,145.8**		
Full-year 2019 Downgrades: 355 borrowers	**305,000.9**		

Source: J.P. Morgan.

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
January					
23-Jan-19	Apres Static CLO 1	ArrowMark Colorado Holdings	J.P. Morgan		399.9
23-Jan-19	Dryden Senior Loan Fund 75	PGIM	Jefferies		428.8
24-Jan-19	CBAM CLO 2019-9	CBAM CLO Mgmt.	Barclays		571.4
24-Jan-19	GoldenTree Loan Management US CLO 4	GoldenTree Loan Mgmt.	Morgan Stanley		807.8
25-Jan-19	Assurant CLO IV	Assurant CLO Mgmt.	Bank of America Merrill Lynch		454.0
25-Jan-19	KKR CLO 24	KKR Financial Advisors	Citigroup		402.0
25-Jan-19	Fortress Credit Opportunities VII CLO	FCO VII CLO	Natixis	Refinancing	488.5
25-Jan-19	Octagon Investment Partners XXI	Octagon Credit Investors	Nomura	Reset	706.5
28-Jan-19	Sound Point CLO XXII	Sound Point Capital Mgmt.	Bank of America Merrill Lynch		508.8
28-Jan-19	Ares LI 2019-51	Ares CLO Mgmt.	BNP Paribas		507.1
28-Jan-19	Neuberger Berman Loan Advisors CLO 32	Neuberger Berman Loan Advisors	Wells Fargo		602.0
29-Jan-19	PPM CLO 2	PPM Loan Mgmt.	Goldman Sachs		405.6
30-Jan-19	Carlyle Global Market Strategies 2015-5	Carlyle Investment Mgmt.	Citigroup	Reset	466.7
		Total number and volume:		**13**	**6,749.0**
February					
1-Feb-19	CarVal CLO II	CarVal CLO Mgmt.	J.P. Morgan		732.8
7-Feb-19	Anchorage Capital CLO 13	Anchorage Capital Group	Goldman Sachs		505.0
8-Feb-19	TCI-Flatiron 2016-1	TCI Capital Mgmt.	Bank of America Merrill Lynch	Refinancing	368.0
8-Feb-19	Buckhorn Park CLO 2019-1	GSO/Blackstone Debt Funds Mgmt.	Barclays		502.1
8-Feb-19	Golub Capital Partners CLO 40	OPAL BSL	MUFG Securities		444.2
11-Feb-19	TCW CLO 2019-1 AMR	TCW Asset Mgmt. Company	MUFG Securities		402.9
11-Feb-19	ABPCI Direct Lending Fund CLO V	AB Private Credit Investors	Natixis		350.0
12-Feb-19	Barings CLO 2019-1	Barings	Barclays		506.0
13-Feb-19	Magnetite XXI	BlackRock Financial Mgmt.	Citigroup		500.3
14-Feb-19	Octagon Investment Partners 40	Octagon Credit Investors	BNP Paribas		606.3
14-Feb-19	Elmwood CLO I	Elmwood Asset Mgmt.	Citigroup		499.4
14-Feb-19	Jamestown CLO XII	Investcorp Credit Mgmt.	Citigroup		455.2
14-Feb-19	Sound Point CLO XII	Sound Point Capital Mgmt.	Credit Suisse	Refinancing	644.0
14-Feb-19	Voya CLO 2019-1	Voya Alternative Asset Mgmt.	Jefferies		398.7
15-Feb-19	BlueMountain CLO XXIV	BlueMountain Capital Mgmt.	Bank of America Merrill Lynch		506.2
15-Feb-19	Wellfleet CLO X	Wellfleet Credit Partners	Mizuho		314.8
15-Feb-19	CIFC Funding 2019-1	CIFC CLO Mgmt.	Morgan Stanley		606.5
19-Feb-19	Canyon CLO 2019-1	Canyon CLO Advisors	Bank of America Merrill Lynch		404.9
20-Feb-19	Dryden 33 Senior Loan Fund	PGIM	Goldman Sachs	Reset	940.0
20-Feb-19	Rockford Tower CLO 2019-1	Rockford Tower Capital Mgmt.	Morgan Stanley		506.6
21-Feb-19	Carlyle US CLO 2019-1	Carlyle CLO Mgmt.	Citigroup		602.7
21-Feb-19	Kayne CLO III	Kayne Anderson Capital Advisors	J.P. Morgan		451.5
21-Feb-19	ALM XIX	Apollo Credit Mgmt.	Morgan Stanley	Refinancing	439.0
22-Feb-19	Ellington CLO IV	Ellington CLO Mgmt.	Barclays		478.5
22-Feb-19	Atlas CLO XIII	Crescent Capital Group	Jefferies		509.2
22-Feb-19	Battalion CLO XIV	Brigade Capital Mgmt.	Morgan Stanley		507.8
22-Feb-19	Oak Hill Credit Funding 2	Oak Hill Advisors	Morgan Stanley		603.5
22-Feb-19	OCP CLO 2019-16	Onex Credit Partners	Natixis		505.1

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
22-Feb-19	AIG CLO 2019-1	AIG Asset Mgmt.	Wells Fargo		504.7
28-Feb-19	JFIN Revolver CLO 2019	Jefferies Finance	Jefferies		259.3
28-Feb-19	Golub Capital Partners CLO 34	GC Investment Mgmt.	Natixis	Re-Issuance	420.4
28-Feb-19	Ares CLO LII	Ares CLO Mgmt.	Societe Generale		507.5
		Total number and volume:		**32**	**15,982.7**
March					
1-Mar-19	Octagon Investment Partners XXIV	Octagon Credit Investors	Bank of America Merrill Lynch	Reset	808.7
1-Mar-19	CIFC Funding 2019-II	CIFC CLO Mgmt.	Deutsche Bank		502.3
5-Mar-19	Palmer Square Loan Funding 2019-1	Palmer Square Capital Mgmt.	Citigroup		499.0
8-Mar-19	Garrison BSL CLO 2016-1	Garrison Funding	Barclays	Reset	372.4
8-Mar-19	THL Credit Lake Shore Middle Market CLO I	THL Credit Advisors	Deutsche Bank		410.5
8-Mar-19	Octagon Investment Partners 41 CLO	Octagon Credit Investors	J.P. Morgan		501.9
8-Mar-19	THL Credit Wind River 2019-1	THL Credit Advisors	Natixis		504.7
11-Mar-19	Bain Capital Credit 2019-1	Bain Capital Credit	Jefferies		506.8
13-Mar-19	Golub Capital Partners CLO 41	OPAL BSL	Bank of America Merrill Lynch		407.5
14-Mar-19	LCM XIX	LCM Asset Mgmt.	Morgan Stanley	Refinancing	444.0
15-Mar-19	Barings CLO 2019-2	Barings	Bank of America Merrill Lynch	Re-Issuance	508.1
15-Mar-19	Trinitas CLO X	Trinitas Capital Mgmt.	Barclays		609.6
15-Mar-19	Verde CLO	Invesco RR Fund	Goldman Sachs		506.4
15-Mar-19	Ares XXXIX CLO	Ares CLO Mgmt.	J.P. Morgan	Reset	465.0
19-Mar-19	Mountain View XIV AMR	Seix Investment Advisors	BNP Paribas		404.7
22-Mar-19	Kayne CLO 4	Kayne Anderson Capital Advisors	Goldman Sachs		302.6
22-Mar-19	Ballyrock CLO 2016-1	Ballyrock Investment Advisors	J.P. Morgan	Refinancing	321.3
22-Mar-19	Steele Creek 2019-1	Steele Creek Investment Mgmt.	RBC Capital Markets		405.6
23-Mar-19	Venture 36 CLO	MJX Asset Mgmt.	BNP Paribas		558.8
27-Mar-19	Greywolf CLO IV	Greywolf Loan Mgmt.	Goldman Sachs	Re-Issuance	510.6
27-Mar-19	Dryden 36 Senior Loan Fund	PGIM	Goldman Sachs	Reset	646.8
27-Mar-19	Maranon middle market 2019-1	Maranon Capital	Morgan Stanley		410.0
27-Mar-19	Cerberus Loan Funding XXVI	Cerberus Business Finance	Natixis		378.8
27-Mar-19	Oaktree CLO 2019-1	Oaktree Capital Mgmt.	Wells Fargo		744.8
28-Mar-19	Madison Park Funding XXXIV	Credit Suisse Asset Mgmt.	Credit Suisse		503.3
28-Mar-19	KKR CLO 25	KKR Financial Advisors	GreensLedge		452.0
28-Mar-19	LCM 30 CLO	LCM Asset Mgmt.	Morgan Stanley		404.6
29-Mar-19	Newstar Berkeley Fund CLO	First Eagle Private Credit	Citigroup	Refinancing	407.5
29-Mar-19	Mariner CLO 7	Mariner Investment Group	Citigroup		405.9
29-Mar-19	Pikes Peak CLO 3	Partners Group US Mgmt.	Credit Suisse		481.8
29-Mar-19	Ares LIII CLO	Ares CLO Mgmt.	J.P. Morgan		589.3
29-Mar-19	OZLM XXIII	Och-Ziff Loan Mgmt.	Morgan Stanley		505.4
		Total number and volume:		**32**	**15,480.2**
April					
2-Apr-19	Northwoods Capital XVIII Limited	Angelo Gordon & Co. LP	Citigroup		450.9
3-Apr-19	Hayfin Kingsland X	Hayfin Capital Mgmt.	BNP Paribas		500.5
3-Apr-19	Sound Point CLO VIII-R	Sound Point Capital Mgmt.	Citigroup	Re-Issuance	677.9

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
4-Apr-19	Carlyle Global Market Strategies CLO 2012-4	Carlyle Investment Mgmt.	Barclays	Reset	553.3
5-Apr-19	THL Credit Wind River 2019-3	THL Credit Advisors	BNP Paribas		611.4
5-Apr-19	Antares middle market CLO 2019-1	Antares Capital Advisers	Deutsche Bank		505.3
5-Apr-19	Elmwood CLO II	Elmwood Asset Mgmt.	J.P. Morgan		1,003.2
10-Apr-19	CBAM CLO 2019-10	CBAM CLO Mgmt.	Citigroup		401.9
10-Apr-19	Benefit Street Partners CLO IV	Benefit Street Partners	Deutsche Bank	Refinancing	438.0
10-Apr-19	Apidos CLO XXXI	CVC Credit Partners	Goldman Sachs		634.1
11-Apr-19	Barings CLO 2019-III	Barings	Credit Suisse		405.4
11-Apr-19	Nassau 2019-I CLO	NCC CLO Manager	J.P. Morgan		503.3
11-Apr-19	Magnetite XXII CLO	BlackRock Financial Mgmt.	Wells Fargo		656.4
12-Apr-19	Oaktree CLO 2019-2	Oaktree Capital Mgmt.	Morgan Stanley		504.7
12-Apr-19	Golub Capital Partners CLO 42(M)	GC Investment Mgmt.	Wells Fargo		804.2
12-Apr-19	Diamond CLO 2019-1	GSO Capital Partners	Wells Fargo		573.8
12-Apr-19	Octagon Investment Partners 42	Octagon Credit Investors	Wells Fargo		503.5
15-Apr-19	Trinitas CLO V	Trinitas Capital Mgmt.	Natixis	Refinancing	350.0
17-Apr-19	Neuberger Berman Loan Advisers CLO 31	Neuberger Berman Loan Advisors	Barclays		504.8
17-Apr-19	BlueMountain CLO 2013-1	BlueMountain Capital Mgmt.	Citigroup	Refinancing	372.0
17-Apr-19	CIFC Funding 2019-III	CIFC CLO Mgmt.	Citigroup		605.4
17-Apr-19	Palmer Square Loan Funding 2019-2	Palmer Square Capital Mgmt.	Citigroup		500.8
17-Apr-19	Ocean Trails CLO VII	Five Arrows Managers North America	Credit Suisse		405.1
23-Apr-19	Park Avenue Institutional Advisers 2019-1	Park Avenue Institutional Advisers	J.P. Morgan		398.7
25-Apr-19	Madison Park Funding XXXV	Credit Suisse Asset Mgmt.	Bank of America Merrill Lynch		801.3
25-Apr-19	Dryden 72 CLO	PGIM	Goldman Sachs		404.3
25-Apr-19	Octagon Investment Partners 20-R	Octagon Credit Investors	J.P. Morgan	Re-Issuance	510.7
25-Apr-19	Battalion CLO X	Brigade Capital Mgmt.	Morgan Stanley	Refinancing	368.2
25-Apr-19	LCM 29 CLO	CM Asset Mgmt.	Natixis		404.2
25-Apr-19	Owl Rock CLO I	Owl Rock Capital Advisors	Natixis		596.1
25-Apr-19	Eaton Vance CLO 2019-1	Eaton Vance Mgmt.	Wells Fargo		405.1
26-Apr-19	Sound Point CIO XXIII	Sound Point Capital Mgmt.	Barclays		608.2
26-Apr-19	Middle Market Credit Fund CLO 2019-2	Middle Market Credit Fund	Citigroup		400.3
29-Apr-19	Barings BDC Static CLO 2019-1	Barings	Bank of America Merrill Lynch		449.3
29-Apr-19	Cedar Funding XI	Aegon USA Investment Mgmt.	Jefferies		404.0
30-Apr-19	Allegro CLO X	AXA Investment Managers	Bank of America Merrill Lynch		306.6
30-Apr-19	Marble Point CLO XV	Marble Point CLO Mgmt.	Credit Suisse		404.0
30-Apr-19	Regatta II Funding	Napier Park Global Capital (US)	Goldman Sachs	Refinancing	373.2
		Total number and volume:		**38**	**19,299.7**
May					
1-May-19	Birch Grove CLO I	Birch Grove Capital	J.P. Morgan		403.1
3-May-19	PPM CLO 3	PPM Loan Mgmt.	Credit Suisse		402.8
6-May-19	MidOcean Credit CLO VI	MidOcean Credit Fund Mgmt.	Jefferies	Refinancing	368.0
6-May-19	ABPCI Direct Lending Fund CLO I	AB Private Credit Investors	Natixis	Reset	400.8
7-May-19	Madison Park Funding XIX	Credit Suisse Asset Mgmt.	MUFG Securities	Refinancing	486.0
10-May-19	KKR CLO 16	KKR Financial Advisors	Citigroup	Refinancing	644.3
10-May-19	Trimaran CAVU 2019-1	KDA/Trimaran	Credit Suisse		609.9

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
10-May-19	Monroe Capital MML CLO VIII	Monroe Capital Asset Mgmt.	Deutsche Bank		456.3
13-May-19	Symphony CLO XXI	Symphony Asset Mgmt.	BNP Paribas		407.0
13-May-19	TICP CLO XIII	TICP CLO Mgmt.	Goldman Sachs		456.0
13-May-19	Apex Credit CLO 2019-1	Apex Credit Partners	Jefferies		399.0
13-May-19	Wellfleet CLO 2015-1	Wellfleet Credit Partners	Morgan Stanley	Reset	324.6
14-May-19	Carlyle Global Market Strategies CLO 2015-4	Carlyle CLO Mgmt.	Citigroup	Reset	463.1
16-May-19	Atlas Senior Loan Fund XIV	Crescent Capital Group	Barclays		403.1
16-May-19	Westcott Park CLO	GSO/Blackstone Debt Funds Mgmt.	Wells Fargo	Refinancing	588.8
17-May-19	RR 6 Ltd. CLO	Redding Ridge Asset Mgmt.	Deutsche Bank		597.2
17-May-19	Great Lakes CLO 2019-1	BMO Asset Mgmt.	GreensLedge		352.1
20-May-19	Madison Park Funding X 2012-10R	Credit Suisse Asset Mgmt.	Bank of America Merrill Lynch	Refinancing	713.0
21-May-19	OHA Credit Funding 3 CLO	Oak Hill Advisors	Bank of America Merrill Lynch		708.0
21-May-19	Venture 37 CLO	MJX Asset Mgmt.	Jefferies		506.5
22-May-19	MCF CLO IX	Madison Capital Funding	Wells Fargo		300.8
23-May-19	Niagara Park CLO	GSO Capital Partners	BNP Paribas		453.2
24-May-19	BlueMountain CLO XXV Ltd	BlueMountain Capital Mgmt.	Barclays		505.5
24-May-19	Madison Park XXXVII CLO	Credit Suisse Asset Mgmt.	Wells Fargo		596.7
29-May-19	HPS Loan Management 14-2019	HPS Investment Partners	Citigroup		457.4
30-May-19	TICP CLO VI 2016-2	TPG Credit	BNP Paribas	Refinancing	369.0
30-May-19	FS KKR MM CLO 1	FS KKR Capital Corp	Citigroup		507.5
30-May-19	AIMCO CLO 10	Allstate Investment Mgmt. Company	Credit Suisse		455.7
30-May-19	Dryden 68 CLO	PGIM	RBC Capital Markets		508.1
30-May-19	Audax Senior Debt CLO I	Audax Mgmt. Company	Wells Fargo		499.6
31-May-19	Palmer Square 2015-1	Palmer Square Capital Mgmt.	J.P. Morgan	Refinancing	666.9
		Total number and volume:		**31**	**15,009.6**
June					
3-Jun-19	Elevation CLO 2015-4	ArrowMark Colorado Holdings	Bank of America Merrill Lynch	Refinancing	367.8
4-Jun-19	Marathon CLO XIII	Marathon Asset Mgmt.	MUFG Securities		503.3
5-Jun-19	Elm CLO 2014-1	Mariner Investment Group	Citigroup	Refinancing	456.3
5-Jun-19	Voya CLO 2016-4	Voya Alternative Asset Mgmt.	Morgan Stanley	Refinancing	448.0
6-Jun-19	Anchorage Capital CLO 2016-9R	Anchorage Capital Group	J.P. Morgan	Reset	540.4
6-Jun-19	Benefit Street CLO XVII	Benefit Street Partners	Wells Fargo		508.2
7-Jun-19	CIFC Funding 2019-IV	CIFC Asset Mgmt.	BNP Paribas		510.6
7-Jun-19	Ballyrock CLO 2019-1	Ballyrock Investment Advisors	J.P. Morgan		402.8
7-Jun-19	Golub Capital Partners CLO 44(M)	GC Investment Mgmt.	Natixis		805.5
10-Jun-19	Riserva CLO	Invesco RR Fund	Credit Suisse	Refinancing	552.0
10-Jun-19	Hayfin Kingsland XI	Hayfin Capital Mgmt.	J.P. Morgan		403.1
14-Jun-19	Carlyle US CLO 2019-2	Carlyle CLO Mgmt.	Bank of America Merrill Lynch		559.4
18-Jun-19	Black Diamond CLO 2019-2	Black Diamond	Mizuho		507.5
19-Jun-19	Z Capital Credit Partners CLO 2019-1	Z Capital CLO Mgmt.	Amherst Pierpont Securities		327.4
19-Jun-19	Rockford Tower CLO 2019-2	Rockford Tower Capital Mgmt.	J.P. Morgan		506.5
20-Jun-19	THL Credit Wind River 2012-1 CLO	THL Credit Advisors	Citigroup	Refinancing	424.9
20-Jun-19	Voya CLO 2019-2	Voya Alternative Asset Mgmt.	Citigroup		403.7
20-Jun-19	Octagon Investment Partners 44	Octagon Credit Investors	Morgan Stanley		507.5

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
21-Jun-19	Kayne CLO 5	Kayne Anderson Capital Advisors	Barclays		446.4
21-Jun-19	ALM VII	Apollo Credit Mgmt.	Citigroup	Refinancing	641.0
21-Jun-19	Avery Point VII	Bain Capital Credit	Credit Suisse	Refinancing	346.2
21-Jun-19	Vibrant CLO XI	Vibrant Capital Partners	Societe Generale		504.5
24-Jun-19	Golub Capital Partners CLO 35(B)	Opal BSL	Bank of America Merrill Lynch	Refinancing	466.6
24-Jun-19	California Street CLO IX	Symphony Asset Mgmt.	Barclays	Reset	553.9
24-Jun-19	Dryden 75 Senior Loan Fund	PGIM	Jefferies	Reset	493.2
24-Jun-19	Fortress Credit BSL VII CLO	FC BSL VII Mgmt.	MUFG Securities		451.8
25-Jun-19	Shackleton 2019-XIV	Alcentra NY	Citigroup		441.7
26-Jun-19	Allegro CLO IV	AXA Investment Managers	Goldman Sachs	Refinancing	414.0
27-Jun-19	Woodmont 2019-6 CLO	MidCap Fin. Services Capital Mgmt.	Citigroup		509.1
27-Jun-19	CarVal CLO III	CarVal CLO Mgmt.	J.P. Morgan		504.0
27-Jun-19	Battery Park CLO	Goldman Sachs Asset Mgmt.	Wells Fargo		354.9
28-Jun-19	Palmer Square Loan Funding 2019-3	Palmer Square Capital Mgmt.	Citigroup		500.3
28-Jun-19	MCF CLO V	Madison Capital Funding	Natixis	Refinancing	240.0
28-Jun-19	OCP CLO 2019-17	Onex Credit Partners	Natixis		506.5
		Total number and volume:		**34**	**16,108.4**
July					
1-Jul-19	Dryden 43 Senior Loan Fund	PGIM	BNP Paribas	Refinancing	554.4
1-Jul-19	Newstar Clarendon Fund CLO	First Eagle Private Credit	Citigroup	Refinancing	256.6
3-Jul-19	Venture XV CLO	MJX Asset Mgmt.	Credit Suisse	Reset	572.2
10-Jul-19	Ocean Trails CLO VI	Five Arrows Managers	Natixis	Refinancing	275.5
11-Jul-19	Southwick Park CLO	Blackstone/GSO CLO Mgmt.	Barclays		503.5
11-Jul-19	Wellfleet CLO 2019-1	Wellfleet Credit Partners	Citigroup		423.6
12-Jul-19	Shackleton 2016-IX CLO	Alcentra NY	Bank of America Merrill Lynch	Refinancing	254.0
12-Jul-19	Pikes Peak CLO 4	Partners Group US Mgmt.	Bank of America Merrill Lynch		407.0
12-Jul-19	Benefit Street Partners CLO X	Benefit Street Partners	Citigroup	Refinancing	460.0
12-Jul-19	Carlyle Global Market Strategies 2015-1	Carlyle CLO Mgmt.	Morgan Stanley		453.5
15-Jul-19	Responsibility Investments 2019-1	Responsibility Investments	J.P. Morgan		174.7
16-Jul-19	Sound Point CLO IX	Sound Point Capital Mgmt.	Citigroup	Reset	476.1
16-Jul-19	KKR CLO 26	KKR Financial Advisors	Credit Suisse		499.2
16-Jul-19	York CLO 6	York CLO Managed Holdings	Goldman Sachs		405.0
17-Jul-19	Romark CLO III	Romark CLO Advisors	J.P. Morgan		427.7
17-Jul-19	Oaktree CLO 2019-3	Oaktree Capital Mgmt.	Wells Fargo		748.6
18-Jul-19	Symphony CLO XVIII	Symphony Asset Mgmt.	Nomura	Refinancing	310.0
19-Jul-19	ABPCI Direct Lending Fund CLO VI	Alliance Bernstein	Barclays		300.5
19-Jul-19	LCM XIII	LCM Asset Mgmt.	Barclays	Refinancing	375.6
19-Jul-19	Eaton Vance CLO 2013-1	Eaton Vance Mgmt.	Goldman Sachs	Refinancing	390.5
22-Jul-19	Jamestown CLO IX	Investcorp Credit Mgmt.	GreensLedge	Refinancing	368.0
23-Jul-19	Trinitas CLO XI	Trinitas Capital Mgmt.	Goldman Sachs		556.5
24-Jul-19	JMP Credit Advisors CLO IV	JMP Credit Advisors	BNP Paribas	Refinancing	285.8
24-Jul-19	Parallel 2019-1	DoubleLine Capital	Morgan Stanley		406.3
25-Jul-19	Whitebox CLO I	Whitebox Capital Mgmt.	J.P. Morgan		401.5
25-Jul-19	Venture 38 CLO	MJX Asset Mgmt.	Natixis		607.9

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Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
25-Jul-19	GoldenTree Loan Management US CLO 5	GoldenTree Loan Mgmt.	Wells Fargo		602.9
26-Jul-19	HPS Loan Management 15-2019	HPS Investment Partners	Bank of America Merrill Lynch		507.4
26-Jul-19	Ares XLI	Ares CLO Mgmt.	BNP Paribas	Refinancing	390.0
26-Jul-19	OZLM XXIV	Och-Ziff Loan Mgmt.	BNP Paribas		406.7
26-Jul-19	Voya 2016-2	Voya Alternative Asset Mgmt.	Credit Suisse	Refinancing	368.1
26-Jul-19	Bain Capital Credit CLO 2019-2	Bain Capital Credit	Goldman Sachs		509.0
26-Jul-19	Golub Capital Partners CLO 43(B)	Opal BSL	Morgan Stanley		405.2
26-Jul-19	Anchorage CLO 11	Anchorage Capital Group	Wells Fargo		404.7
26-Jul-19	Steele Creek Investment CLO 2019-2	Steele Creek Investment Mgmt.	Wells Fargo		405.2
30-Jul-19	Zais CLO 13	Zais Leveraged Loan Master	J.P. Morgan		402.6
		Total number and volume:		**36**	**15,295.6**
August					
2-Aug-19	Octagon 43 CLO	Octagon Credit Investors	Citigroup		506.1
5-Aug-19	Peaks CLO 2	ArrowMark Colorado Holdings	Goldman Sachs	Reset	136.0
5-Aug-19	Madison Park XXIV	Credit Suisse Asset Mgmt.	Goldman Sachs	Refinancing	693.1
5-Aug-19	Garrison MML CLO 2019-1	Garrison Middle Market II Fund. Mgr.	Natixis		352.8
7-Aug-19	TICP CLO XIV	TICP CLO Mgmt.	Citigroup		402.4
7-Aug-19	Sound Point CLO XIV	Sound Point Capital Mgmt.	Credit Suisse	Refinancing	451.5
7-Aug-19	Vibrant CLO IV	DFG Investment Advisers	Morgan Stanley	Reset	408.1
9-Aug-19	CIFC Funding 2019-V	CIFC Asset Mgmt.	Bank of America Merrill Lynch		506.6
9-Aug-19	Crown Point CLO 8	Pretium Credit Mgmt.	J.P. Morgan		453.5
9-Aug-19	Guggenheim CLO 2019-1	Guggenheim Partners Inv. Mgmt.	MUFG Securities		405.1
12-Aug-19	Elevation CLO 2013-1	ArrowMark Colorado Holdings	Goldman Sachs	Reset	333.2
13-Aug-19	Bain Capital Credit 2016-2	Bain Capital Credit	MUFG Securities	Refinancing	462.0
13-Aug-19	BCC Middle Market 2019-1	Bain Capital Specialty Finance	Natixis		501.0
14-Aug-19	HPS Loan Management 10-2016	HPS Investment Partners	Nomura		324.0
15-Aug-19	Cedar Funding X CLO	Aegon USA Investment Mgmt.	Citigroup		403.8
15-Aug-19	Neuberger Berman Loan Advisers CLO 33	Neuberger Berman Loan Advisors	Credit Suisse		606.0
15-Aug-19	THL Credit Lake Shore MM CLO II	THL Credit Advisors	Deutsche Bank		305.5
16-Aug-19	Nassau 2019-II	NCC CLO Manager	Natixis		404.8
21-Aug-19	Apidos XI	CVC Credit Partners	RBC Capital Markets	Reset	376.4
22-Aug-19	Golub Capital Partners CLO 45(M)	GC Investment Mgmt.	Morgan Stanley		729.9
26-Aug-19	PennantPark CLO I	PennantPark Investment Advisers	GreensLedge		301.4
27-Aug-19	Canyon CLO 2019-2	Canyon CLO Advisors	Barclays		505.8
28-Aug-19	ICG US CLO 2019-1	ICG Debt Advisors	Citigroup		400.2
29-Aug-19	Marble Point CLO XVI	Marble Point CLO Mgmt.	Bank of America Merrill Lynch		480.8
29-Aug-19	BlueMountain 2016-2	BlueMountain Capital Mgmt.	Citigroup	Reset	470.8
		Total number and volume:		**25**	**10,920.4**
September					
3-Sep-19	Regatta XII Funding	Regatta Loan Mgmt.	BNP Paribas		408.6
3-Sep-19	Sound Point CLO XXIV	Sound Point Capital Mgmt.	Credit Suisse		505.6
3-Sep-19	Tralee VI	Par-Four Investment Mgmt.	Jefferies		353.5
9-Sep-19	Venture XXIV CLO 2016-24R	MJX Asset Mgmt.	Jefferies	Refinancing	375.5

Sources: J.P. Morgan; S&P LCD.

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
9-Sep-19	JFIN Revolver CLO 2019-II	Jefferies Finance	Jefferies		258.5
10-Sep-19	Carlyle US 2019-3 CLO	Carlyle CLO Mgmt.	Citigroup		606.3
11-Sep-19	KKR CLO 27	KKR Financial Advisors	Barclays		449.2
12-Sep-19	Palmer Square Loan Funding 2019-4	Palmer Square Capital Mgmt.	Citigroup		499.5
16-Sep-19	CIFC Funding 2016-1	CIFC Asset Mgmt.	Goldman Sachs	Reset	465.0
17-Sep-19	Voya CLO 2019-3	Voya Alternative Asset Mgmt.	GreensLedge		476.5
18-Sep-19	OZLM XIV	Sculptor Loan Mgmt.	Deutsche Bank	Refinancing	343.8
18-Sep-19	Park Avenue Institutional Advisers 2019-2	Park Avenue Institutional Advisers	J.P. Morgan		399.7
20-Sep-19	TCI-Symphony CLO 2016-1	TCI Capital Mgmt.	Bank of America Merrill Lynch	Refinancing	320.0
20-Sep-19	Burnham Park CLO	GSO/Blackstone Debt Funds Mgmt.	Citigroup	Refinancing	352.0
20-Sep-19	OHA Credit Funding 4 CLO	Oak Hill Advisors	Citigroup		605.9
20-Sep-19	Bain Capital Credit CLO 2019-3	Bain Capital Credit	Goldman Sachs		508.5
20-Sep-19	THL Credit Wind River 2019-2	THL Credit Advisors	Morgan Stanley		508.3
20-Sep-19	Sound Point CLO XV	Park Avenue Institutional Advisers	Sound Point Capital Mgmt.	Refinancing	416.0
26-Sep-19	Oaktree CLO 2019-4	Oaktree Capital Mgmt. LP	Wells Fargo		751.0
26-Sep-19	Madison Park Funding XXXIII	Credit Suisse Asset Mgmt.	Goldman Sachs		806.0
27-Sep-19	Apex Credit CLO 2019-2	Apex Credit Partners	Jefferies		408.4
27-Sep-19	Palmer Square CLO 2019-1	Palmer Square Capital Mgmt.	Credit Suisse		403.2
27-Sep-19	Dryden 76 CLO	PGIM	BNP Paribas		401.3
27-Sep-19	Trinitas CLO VI	Trinitas Capital Mgmt.	J.P. Morgan	Refinancing	485.4
		Total number and volume:		**24**	**11,107.5**
October					
2-Oct-19	Bardot CLO	Invesco RR Fund LLP	Barclays		600.2
2-Oct-19	AMMC CLO 19	American Money Mgmt. Corporation	MUFG Securities	Refinancing	371.3
3-Oct-19	Fort Washington CLO 2019-1	Fort Washington Investment Advisors	J.P. Morgan		401.3
3-Oct-19	THL Credit Wind River 2017-1 CLO	THL Credit Advisors	Bank of America Merrill Lynch	Refinancing	485.4
4-Oct-19	Symphony CLO XIV	Symphony Asset Mgmt.	BNP Paribas	Refinancing	557.5
4-Oct-19	Fortress Credit BSL VIII	Fortress Credit	Natixis		401.0
4-Oct-19	AGL CLO I	AGL CLO Credit Mgmt.	J.P. Morgan		454.0
10-Oct-19	CBAM 2019-11 CLO	CBAM Partners	Citigroup		498.9
11-Oct-19	Atlas Senior Loan Fund XV	Crescent Capital Group	Barclays		406.5
11-Oct-19	Magnetite XXIII CLO	BlackRock Financial Mgmt.	J.P. Morgan		522.5
11-Oct-19	Benefit Street CLO XVIII	Benefit Street Partners	J.P. Morgan		507.9
15-Oct-19	AIG CLO 2019-2	AIG Asset Mgmt. EU CLO	Morgan Stanley		508.0
15-Oct-19	Voya CLO 2012-4	Voya Alternative Asset Mgmt.	BNP Paribas	Reset	374.3
15-Oct-19	Wellfleet CLO 2017-1	Wellfleet Credit Partners	Citigroup	Refinancing	290.3
16-Oct-19	Monroe Capital MML CLO IX	Monroe Capital	BNP Paribas		454.4
16-Oct-19	Elmwood CLO III	Elmwood Asset Mgmt.	Morgan Stanley		506.8
17-Oct-19	Cathedral Lake IV	Carlson CLO Advisors	Credit Suisse	Refinancing	337.0
17-Oct-19	Jamestown CLO XIV	Investcorp Credit Mgmt. US	Citigroup		404.9
18-Oct-19	LCM XXII	LCM Asset Mgmt.	Natixis	Refinancing	277.2
18-Oct-19	Trimaran CAVU 2019-2	Trimaran Advisors	Citigroup		510.2
18-Oct-19	ICG US CLO 2017-1	ICG Debt Advisors - Manager Series	Barclays	Refinancing	256.0
18-Oct-19	Flatiron CLO 19	NYL Investors	MUFG Securities		407.2

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
18-Oct-19	TCW 2019-2	TCW Asset Mgmt. Co.	Jefferies		408.0
21-Oct-19	Octagon Investment Partners 45	Octagon Credit Investors	Goldman Sachs		517.6
22-Oct-19	ABPCI Direct Lending Fund CLO VII	AB Private Credit Investors	Natixis		348.1
22-Oct-19	Ares LIV CLO	Ares CLO Mgmt.	Barclays		402.1
23-Oct-19	Barings Middle Market CLO 2019-I	Barings	Bank of America Merrill Lynch		401.3
23-Oct-19	BlueMountain CLO XXVI	BlueMountain Capital Mgmt.	J.P. Morgan		504.6
25-Oct-19	Bain Capital Credit CLO 2019-4	Bain Capital Credit U.S. CLO Mgr.	Credit Suisse		603.8
25-Oct-19	Neuberger Berman CLO 34	Neuberger Berman Loan Advisers	BNP Paribas		502.1
25-Oct-19	OZLM 2013-3	Och-Ziff Loan Mgmt. LP	Barclays	Refinancing	522.8
		Total number and volume:		**31**	**13,742.7**
November					
1-Nov-19	MidOcean Credit CLO X	MidOcean Credit Fund Mgmt.	Barclays		402.7
1-Nov-19	Dryden CLO 80	PGIM	Bank of America Merrill Lynch		410.4
5-Nov-19	Voya CLO 2019-4	Voya Alternative Asset Mgmt.	Wells Fargo		603.4
5-Nov-19	Vibrant CLO V	DFG Investment Advisers	BNP Paribas	Refinancing	288.0
6-Nov-19	Ballyrock CLO 2019-2	Ballyrock Investment Advisors	Citigroup		401.2
7-Nov-19	Beechwood Park CLO	Blackstone/GSO CLO Mgmt.	Goldman Sachs		810.4
8-Nov-19	Owl Rock CLO I I	Owl Rock Capital Advisors	Deutsche Bank		394.8
8-Nov-19	Churchill Middle Market CLO IV	Churchill Asset Mgmt.	Natixis		356.7
8-Nov-19	Madison Park Funding XXI	Credit Suisse Asset Mgmt.	Citigroup	Reset	744.0
12-Nov-19	Guggenheim MM CLO 2019-2	Guggenheim Partners Inv. Mgmt.	Barclays		419.1
13-Nov-19	Audax Senior Debt CLO II	Audax Mgmt. Company	Wells Fargo		481.0
13-Nov-19	Barings CLO 2019-IV	Barings	Morgan Stanley		405.1
15-Nov-19	Shackleton 2019-XV CLO	Alcentra NY	Barclays		403.8
19-Nov-19	Magnetite XXIV	Blackrock Financial Mgmt.	Wells Fargo		608.8
19-Nov-19	Kayne CLO 6	Kayne Anderson Capital Advisors LP	GreensLedge Capital Markets		401.0
19-Nov-19	GoldenTree Loan Management US CLO 6	GoldenTree Loan Mgmt. LP	Bank of America Securities		553.6
20-Nov-19	East West Inv. Management CLO 2019-1	East West Invesment Mgmt.	Jefferies		356.9
21-Nov-19	Cerberus Loan Funding XXVII	Cerberus Business Finance	Natixis		352.8
21-Nov-19	Venture XXV	MJX Asset Mgmt.	Citigroup	Refinancing	384.0
21-Nov-19	Marathon CLO 14	Marathon Asset Mgmt.	Citigroup		405.8
22-Nov-19	Regatta XVI Funding	Regatta Loan Mgmt.	BNP Paribas		604.9
22-Nov-19	522 Funding CLO I	Morgan Stanley Investment Mgmt.	Morgan Stanley		457.3
22-Nov-19	Oak Hill 2015-1	Oak Hill Advisors LP	Citigroup	Reset	593.3
25-Nov-19	Battalion CLO XVI	Brigade Capital Mgmt.	Mizuho Securities USA		402.5
25-Nov-19	Northwoods Capital 20 Limited	Angelo, Gordon & Co	Barclays		450.2
27-Nov-19	CBAM 2018-6	CBAM Partners	Morgan Stanley	Reset	921.5
		Total number and volume:		**26**	**12,612.9**
December					
2-Dec-19	CIFC Funding 2019-VI	CIFC Asset Mgmt.	Credit Suisse		403.2
4-Dec-19	Madison Park Funding XXXVI	Credit Suisse Asset Mgmt.	Citigroup		797.2
6-Dec-19	Benefit Street Partners CLO XIX	Benefit Street Partners	Morgan Stanley		508.7
6-Dec-19	Carlyle US CLO 2019-4	Carlyle CLO Mgmt.	J.P. Morgan		455.2

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2019 US CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
6-Dec-19	Golub Capital Partners 46(M) CLO	GC Investment Mgmt.	Deutsche Bank		404.1
9-Dec-19	Neuberger Berman CLO 35	Neuberger Berman Loan Advisors	Societe Generale		560.5
11-Dec-19	Allegancy Park CLO	Blackstone/GSO CLO Mgmt.	Wells Fargo		504.6
13-Dec-19	Brightwood Capital MM CLO 2019-1	Brightwood SPV Advisors	GreensLedge Capital Markets		305.0
13-Dec-19	AGL Core CLO 2	AGL Credit Mgmt. LP	BNP Paribas		449.7
13-Dec-19	Sound Point CLO XXV	Sound Point Capital Mgmt. LP	Morgan Stanley		457.8
17-Dec-19	HalseyPoint CLO I	HalseyPoint Asset Mgmt.	J.P. Morgan		458.9
17-Dec-19	Mountain View CLO XV	Seix Investment Advisors	Goldman Sachs		406.4
17-Dec-19	RR 7 CLO	Redding Ridge Asset Mgmt.	BofA Securities		522.0
17-Dec-19	First Eagle Commercial Funding 2016-1	First Eagle Private Credit	Wells Fargo	Reset	287.7
19-Dec-19	Apidos CLO XXXII	CVC Credit Partners U.S. CLO Mgmt.	Credit Suisse		404.6
20-Dec-19	York CLO 7	York Capital Mgmt.	Barclays		402.8
20-Dec-19	Antares CLO 2019-2	Antares Capital Advisors	Citigroup		400.8
20-Dec-19	First Eagle BSL CLO 2019-1	First Eagle Private Credit Advisors	JP Morgan		405.3
24-Dec-19	JFIN CLO 2013	Apex Credit Partners	Jeffries	Reset	384.6
		Total number and volume:		**19**	**8,519.1**
	2019 total number and volume of US CLO issuance:			**341**	**160,827.7**

Sources: J.P. Morgan; S&P LCD.

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US CLO Issuance

by year

	Annual CLO Issuance ($mn)	Number of deals
1997	3,354	6
1998	11,748	21
1999	19,452	31
2000	16,506	30
2001	13,796	30
2002	13,508	36
2003	18,658	46
2004	29,097	64
2005	52,026	107
2006	94,056	178
2007	90,047	157
2008	21,378	44
2009	1,252	3
2010	3,813	10
2011	13,577	30
2012	55,707	122
2013	87,052	183
2014	131,864	257
2015	109,594	216
2016	111,831	251
2017	282,217	571
2018	277,615	558
2019	160,828	341

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Euro CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
January					
25-Jan-19	Cadogan Square CLO XIII	Credit Suisse Asset Mgmt.	Barclays Bank		580.6
		Total number and volume:		**1**	**580.6**
February					
1-Feb-19	Crosthwalte Park CLO	Blackstone/GSO Debt Mgmt.	GreensLedge		581.8
1-Feb-19	Carlyle Euro CLO 2019-1	Carlyle Investment Mgmt.	BNP Paribas		468.2
8-Feb-19	Harvest XXI	Investcorp	Barclays Bank		463.6
8-Feb-19	BlueMountain Fuji CLO IV	BlueMountain Fuji Capital Mgmt.	Deutsche Bank		408.0
8-Feb-19	Aqueduct Europeal CLO 3-2019	HPS Inbestment Partners	Citigroup		466.1
14-Feb-19	CVC Cordatus Loan Fund IV	CVC Credit Partners	Morgan Stanley	Reset	405.0
14-Feb-19	Aurium CLO V	Spire Mgmt.	Bank of America Merrill Lynch		505.7
25-Feb-19	St. Paul's CLO X	Intermediate Capital Managers	Goldman Sachs		465.8
		Total number and volume:		**8**	**3,764.2**
March					
1-Mar-19	Ares European CLO XI	Ares European Loan Mgmt.	Citigroup		524.8
1-Mar-19	RRE 1 Loan Management	Redding Ridge Asset Mgmt.	BNP Paribas		513.6
4-Mar-19	Bilbao CLO II	Guggenheim Partners Europe	Citigroup		464.7
13-Mar-19	Emerald CLO II	Hayfin	Goldman Sachs		462.0
15-Mar-19	CVC Cordatus Loan Fund XIV	CVC Credit Partners	Goldman Sachs		466.9
15-Mar-19	Euro-Galaxy VII	Pinebridge Investments Europe	Credit Suisse		468.0
22-Mar-19	Arbour VI	Oaktree Capital Mgmt.	Barclays Bank		463.9
28-Mar-19	Accunia European CLO I	AccuniaFondsmaeglerselskab	Citigroup	Re-issuance	535.3
28-Mar-19	Avoca CLO XX	KKR Credit Advisors	Morgan Stanley		512.0
		Total number and volume:		**9**	**4,411.3**
April					
5-Apr-19	Jubilee CLO 2019-XXII	Alcentra	Barclays Bank		457.3
5-Apr-19	OCP Euro CLO 2019-3	Onex Credit Partners LLC	J.P. Morgan		483.9
5-Apr-19	Bardin Hill Loan Advisors Euro. Funding	Bardin Hill Loan Advisors (UK) LLP	Bank of America Merrill Lynch		402.7
11-Apr-19	Sound Point Euro CLO I Funding DAC	Sound Point CLO C-MOA	Citigroup		571.1
12-Apr-19	Cairn CLO IV	Cairn Loan Investments	Credit Suisse	Reset	315.9
12-Apr-19	BlackRock European CLO VIII DAC 2019-8	BlackRock Investment Mgmt.	Natixis		461.6
16-Apr-19	Dryden 69 Euro CLO	PGIM	Deutsche Bank		462.3
17-Apr-19	Clarinda Park CLO	Blackstone/GSO	Bank of America Merrill Lynch	Refinancing	405.5
		Total number and volume:		**8**	**3,560.2**
May					
2-May-19	Voya Euro CLO II	Voya Alternative Asset Mgmt.	Citigroup		452.7
9-May-19	OZLME VI	Och-Ziff Europe Loan Mgmt.	Morgan Stanley		455.7
16-May-19	Arbour CLO IV	Oaktree Capital Mgmt.	BNP Paribas	Refinancing	371.8
17-May-19	Dryden 46 Euro CLO 2016-46R	PGIM	Citigroup	Refinancing	406.8
17-May-19	Carlyle Global Mkt. Strat. Euro CLO 2016-2R	Carlyle Investment Mgmt.	Bank of America Merrill Lynch	Refinancing	335.3
20-May-19	Madison Park Euro Funding XIV 2019-14	Credit Suisse Asset Mgmt.	Credit Suisse		581.5

Note: Deal Size is shown in USD-equivalent.
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Euro CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
24-May-19	Aqueduct EUR CLO 2019-3	HPS Investment Partners	Morgan Stanley		456.3
28-May-19	RRE 2 Loan Management	Redding Ridge Asset Mgmt.	Citigroup		449.0
28-May-19	Invesco Euro CLO II	Invesco European RR LP	Citigroup		459.2
		Total number and volume:		**9**	**3,968.1**
June					
4-Jun-19	St. Paul's CLO XI	Intermediate Capital Managers	Bank of America Merrill Lynch		462.7
6-Jun-19	Fair Oaks Loan Funding I	Fair Oaks Capital	Deutsche Bank		375.0
7-Jun-19	Blackrock European CLO II	BlackRock Investment Mgmt.	Morgan Stanley	Refinancing	408.0
7-Jun-19	Henley I CLO	Napier Park	Citigroup		460.4
10-Jun-19	Black Diamond CLO 2019-1	Black Diamond	Natixis		456.1
10-Jun-19	Tikehau Euro CLO 2016-2R	Tikehau	Citigroup		324.0
10-Jun-19	CIFC European Funding CLO I	CIFC CLO Mgmt. II LLC	Deutsche Bank		463.3
27-Jun-19	Grand Harbour CLO 2019-1	MeDirect Bank	Barclays Bank		462.2
27-Jun-19	Providus CLO III	Permira Debt Managers Group	Bank of America Merrill Lynch		434.5
28-Jun-19	Penta CLO 6	Partners Group	BNP Paribas		463.4
		Total number and volume:		**10**	**4,309.6**
July					
3-Jul-19	Carlyle Euro CLO 2019-2	CELF Advisors	Citigroup		460.9
8-Jul-19	CVC Cordatus Loan Fund XV CLO	CVC Credit Partners	Bank of America Merrill Lynch		457.9
10-Jul-19	BNPP AM Euro CLO 2019	BNP Paribas Asset Mgmt.	BNP Paribas		458.5
10-Jul-19	GoldenTree Loan Management CLO 3	GoldenTree Loan Mgmt.	Barclays Bank		452.4
12-Jul-19	Toro European CLO 6 DAC 2019-6	Chenavari	Morgan Stanley		405.5
16-Jul-19	Harvest XXII	Investcorp	Citigroup		535.8
18-Jul-19	Sound Point Euro CLO II	Sound Point CLO C-MOA LLC.	Credit Suisse		457.9
19-Jul-19	Tikehau CLO V	Tikehau	Natixis		506.3
25-Jul-19	Ares European CLO XII	Ares European Loan Mgmt.	Bank of America Merrill Lynch		516.4
25-Jul-19	GLG Euro CLO II	GLG Partners	Morgan Stanley		250.5
25-Jul-19	Barings Euro CLO 2019-1	Barings	Goldman Sachs		453.9
26-Jul-19	Hayfin Emeralnd CLO III	Hayfin	Citigroup		457.1
29-Jul-19	Euro-Galaxy V	Pinebridge Investments Europe	Bank of America Merrill Lynch	Refinancing	413.9
31-Jul-19	Dunedin Park CLO	Blackstone/GSO	Deutsche Bank		456.7
		Total number and volume:		**14**	**6,283.7**
August					
2-Aug-19	OZLME CLO 2016-1R	Och-Ziff Europe Loan Mgmt.	Credit Suisse	Refinancing	412.1
8-Aug-19	Aurium CLO I 2015-1R	Spire Partners	Barclays	Reset	462.1
28-Aug-19	Euro-Galaxy III	Pinebridge Investments Europe	J.P. Morgan	Refinancing	379.6
		Total number and volume:		**3**	**1,253.9**
September					
9-Sep-19	Dryden 48 Euro CLO 2016	PGIM	BNP Paribas	Reset	414.3
11-Sep-19	Avoca CLO XVII	KKR Credit Advisors	Citigroup	Reset	574.6
12-Sep-19	Purple Finance CLO 2	Ostrum Asset Mgmt.	Natixis		452.9

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Euro CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
13-Sep-19	St. Paul's CLO II	Intermediate Capital Managers	Goldman Sachs	Refinancing	414.4
13-Sep-19	Adagio CLO VIII 2019-8	AXA	Barclays		413.6
18-Sep-19	CVC Cordatus Loan Fund VIII DAC 2017-8R	CVC Credit Partners	Deutsche Bank	Refinancing	348.5
19-Sep-19	Contego CLO VII	Five Arrows Managers	Morgan Stanley		507.8
26-Sep-19	Ares European CLO VIII	Ares European Loan Mgmt.	Barclays	Reset	468.4
26-Sep-19	Aurium CLO III 2017-3R	Spire Partners	Barclays	Refinancing	301.2
27-Sep-19	Harvest CLO XVII 2017-17R	Investcorp	BNP Paribas	Reset	465.1
27-Sep-19	Mackay Shields European CLO 2019-1	Mackay Shields	J.P. Morgan		392.5
27-Sep-19	Northwoods Capital 19 Euro	Northwoods European CLO Mgmt.	Bank of America Merrill Lynch		443.7
		Total number and volume:		**12**	**5,196.9**
October					
3-Oct-19	BlackRock European CLO IX	BlackRock Investment Mgmt.	Credit Suisse		446.2
4-Oct-19	Anchorage Capital Europe CLO 3	Anchorage Capital Group	Barclays		451.6
4-Oct-19	RRE 3 Loan Management	Redding Ridge Asset Mgmt.	Goldman Sachs		443.1
7-Oct-19	Carlyle Global Mkt. Strat. Euro CLO 2013-1R	CELF Advisors	Deutsche Bank	Refinancing	258.9
8-Oct-19	BNPP AM Euro CLO 2017	BNP Paribas Asset Mgmt. France	BNP Paribas	Refinancing	236.1
10-Oct-19	CVC Cordatus Loan Fund V	CVC Credit Partners	Citigroup	Refinancing	322.4
10-Oct-19	Rockford Tower Europe CLO 2019-1	Rockford Tower Capital Mgmt.	Citigroup		449.5
14-Oct-19	Toro European CLO 2017-1R	Chenavari	Barclays	Refinancing	274.0
16-Oct-19	Palmerston Park CLO DAC 2019-1A	GSO/Blackstone	Deutsche Bank	Refinancing	295.6
18-Oct-19	Seapoint Park CLO 2019-1	GSO/Blackstone	Bank of America Merrill Lynch		406.4
18-Oct-19	Armada Euro CLO 2019-4	Brigade	Citigroup		415.1
18-Oct-19	Cairn VII CLO BV 2016-7R	Cairn Loan Investments	GreensLedge Capital Mkts.	Refinancing	223.6
24-Oct-19	Capital Four CLO I	Capital Four CLO Mgmt.	Goldman Sachs		427.5
25-Oct-19	BlueMountain Fuji CLO V	BlueMountain Fuji Capital Mgmt.	Credit Suisse		397.0
28-Oct-19	Dryden 73 Euro CLO	PGIM	Citigroup		457.7
30-Oct-19	Avoca CLO XI	KKR Credit Advisors	Goldman Sachs	Refinancing	355.3
31-Oct-19	Invesco Euro CLO III	Invesco European RR LP	Barclays		456.2
		Total number and volume:		**17**	**6,316.4**
November					
5-Nov-19	Bain Capital Euro CLO 2019-1	Bain Capital Credit	Natixis		448.5
5-Nov-19	CVC Cordatus Loan Fund XVI	CVC Credit Partners	Deutsche Bank		458.1
5-Nov-19	Cairn CLO XI	Cairn Loan Investments	Citigroup		463.7
7-Nov-19	Jubilee CLO 2019-XXIII	Alcentra	Morgan Stanley		452.2
12-Nov-19	Holland Park CLO	GSO/Blackstone	Deutsche Bank		413.9
14-Nov-19	Madison Park Euro Funding VIII	Credit Suisse Asset Mgmt.	Barclays		471.5
15-Nov-19	Bosphorus CLO V	Commerzbank Debt Fund Mgmt.	BNP Paribas		400.5
15-Nov-19	Oak Hill European Credit Partners 2016-5R	Oak Hill	Morgan Stanley	Refinancing	287.0
19-Nov-19	North Westerly VI CLO	NIBC Bank	MUFG Securities		454.2
27-Nov-19	ALME Loan Funding II	Apollo Mgmt. International	Goldman Sachs		375.4
27-Nov-19	Ares European CLO XIII	Ares European Loan Mgmt.	Citigroup		453.2
		Total number and volume:		**11**	**4,678.2**

Note: Deal Size is shown in USD-equivalent.
Sources: J.P. Morgan; S&P LCD.

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Euro CLO Issuance

Date	Issuer Series	Asset Manager	Underwriter	Refi/Reset	Deal Size ($mn)
December					
2-Dec-19	OCP Euro CLO 2017-1	Onex Credit Partners LLC	J.P. Morgan	Reset	360.3
5-Dec-19	Barings Euro CLO 2019-2	Barings	Morgan Stanley		449.9
6-Dec-19	Arbour CLO VII 2019-7	Oaktree Capital Mgmt.	Bank of America Merrill Lynch		457.6
10-Dec-19	Dryden 35 Euro CLO 2014-35R	PGIM	Goldman Sachs	Reset	440.5
		Total number and volume:		**4**	**1,708.3**
	2019 total number and volume of Euro CLO issuance:			**106**	**46,031.4**

Note: Deal Size is shown in USD-equivalent.
Sources: J.P. Morgan; S&P LCD.

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Euro CLO Issuance
by year

	Annual CLO Issuance ($mn)	Number of deals
2001	3,626	8
2002	2,816	8
2003	5,141	13
2004	8,283	18
2005	13,816	26
2006	41,865	74
2007	40,264	65
2008	20,474	29
2009	3,385	3
2010	1,809	1
2011	0	0
2012	0	0
2013	10,337	21
2014	19,152	35
2015	15,399	34
2016	22,759	53
2017	51,017	120
2018	51,764	107
2019	46,031	106

Sources: J.P. Morgan; S&P LCD.

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J.P. Morgan Leveraged Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Leveraged Loan Index by industry											
Automotive	3.01%	1.48%	1.15%	1.91%	7.76%	2.38%	L+379	5.72%	5.11 yrs	6.34%	468bp
Broadcasting	4.68%	2.22%	2.03%	1.15%	10.43%	2.51%	L+294	4.86%	5.60 yrs	4.80%	314bp
Cable and Satellite	3.87%	2.67%	2.10%	1.69%	10.71%	4.15%	L+279	4.69%	5.95 yrs	4.47%	281bp
Chemicals	3.88%	1.42%	1.23%	2.18%	8.97%	3.79%	L+311	5.03%	5.10 yrs	5.39%	372bp
Consumer Products	2.39%	1.75%	0.59%	1.74%	6.61%	2.64%	L+384	5.79%	4.95 yrs	8.25%	659bp
Diversified Media	2.58%	1.99%	0.96%	1.64%	7.36%	3.39%	L+415	5.98%	4.60 yrs	7.10%	544bp
Energy	5.13%	-0.13%	-4.65%	-0.02%	0.09%	3.47%	L+484	6.77%	4.71 yrs	12.10%	1043bp
Financial	3.69%	1.87%	1.76%	1.94%	9.58%	6.20%	L+332	5.24%	4.95 yrs	5.18%	352bp
Food and Beverages	3.59%	1.82%	1.33%	1.64%	8.64%	4.27%	L+300	4.92%	5.24 yrs	5.72%	405bp
Gaming Lodging And Leisure	4.08%	1.92%	1.89%	1.53%	9.74%	6.69%	L+301	4.94%	5.04 yrs	4.86%	320bp
Healthcare	3.74%	1.64%	0.59%	2.82%	9.06%	11.55%	L+369	5.62%	5.05 yrs	6.52%	486bp
Housing	4.20%	2.22%	2.00%	2.35%	11.19%	2.54%	L+317	5.08%	5.07 yrs	5.04%	338bp
Industrials	4.06%	1.83%	1.48%	2.21%	9.90%	5.73%	L+355	5.47%	4.95 yrs	5.98%	431bp
Metals and Mining	3.77%	-1.61%	-5.46%	-2.11%	-5.51%	0.85%	L+399	5.91%	4.29 yrs	10.39%	872bp
Paper and Packaging	3.87%	1.70%	1.68%	1.94%	9.49%	2.64%	L+316	5.06%	4.95 yrs	5.47%	381bp
Retail	5.00%	1.93%	0.10%	3.98%	11.39%	4.00%	L+424	6.16%	4.07 yrs	9.39%	772bp
Services	3.53%	1.56%	1.43%	1.30%	8.03%	11.53%	L+363	5.54%	5.29 yrs	6.15%	449bp
Technology	4.15%	1.31%	1.24%	2.35%	9.34%	13.77%	L+353	5.45%	4.93 yrs	6.08%	442bp
Telecommunications	4.48%	1.27%	1.48%	0.34%	7.75%	3.34%	L+315	5.07%	5.02 yrs	6.16%	449bp
Transportation	3.90%	1.72%	0.99%	1.52%	8.36%	2.12%	L+311	5.00%	4.86 yrs	5.22%	356bp
Utility	3.77%	2.04%	0.90%	0.46%	7.33%	2.46%	L+357	5.49%	4.96 yrs	6.82%	516bp
J.P. Morgan Leveraged Loan Index	**3.89%**	**1.63%**	**1.03%**	**1.85%**	**8.64%**	**100.00%**	**L+350**	**5.42%**	**5.03 yrs**	**6.29%**	**463bp**

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan Leveraged Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Leveraged Loan Index by rating											
BBB	3.81%	1.62%	1.70%	1.20%	8.57%	2.12%	L+181	3.72%	5.41 yrs	3.31%	165bp
Split BBB	4.21%	1.67%	1.91%	1.31%	9.38%	5.92%	L+207	3.97%	5.56 yrs	3.62%	196bp
BB	4.45%	1.73%	1.63%	1.39%	9.50%	19.66%	L+260	4.51%	5.45 yrs	4.35%	268bp
Split BB	4.12%	1.80%	1.42%	1.43%	9.04%	8.90%	L+307	4.99%	4.76 yrs	4.98%	331bp
B	3.65%	1.61%	1.00%	2.27%	8.78%	56.01%	L+390	5.82%	5.01 yrs	6.51%	484bp
Split B/CCC	3.38%	0.59%	-4.53%	2.19%	1.45%	4.54%	L+492	6.84%	3.23 yrs	18.18%	1649bp
Not Rated	3.12%	2.36%	2.22%	-0.36%	7.50%	2.79%	L+528	7.06%	4.80 yrs	7.93%	626bp
J.P. Morgan Leveraged Loan Index by Capital Structure											
Loan Only	3.57%	1.69%	0.90%	1.70%	8.07%	55.85%	L+387	5.78%	4.99 yrs	7.03%	536bp
Loan & Bond	4.27%	1.55%	1.18%	2.03%	9.32%	44.15%	L+304	4.96%	5.08 yrs	5.36%	370bp
J.P. Morgan Leveraged Loan Index by Cov-Lite											
Cov-Lite	3.96%	1.70%	1.20%	2.05%	9.18%	84.01%	L+340	5.32%	5.08 yrs	6.00%	433bp
Not Cov-Lite	3.59%	1.32%	0.19%	0.82%	6.02%	15.99%	L+405	5.97%	4.76 yrs	7.84%	617bp
J.P. Morgan Leveraged Loan Index by Libor Floor											
Libor Floor	3.64%	1.49%	0.35%	1.79%	7.45%	39.79%	L+392	5.85%	4.24 yrs	7.91%	624bp
No Libor Floor	4.14%	1.74%	1.53%	1.90%	9.61%	60.21%	L+323	5.14%	5.55 yrs	5.22%	356bp
J.P. Morgan Leveraged Loan Index by Region											
Domestic	3.86%	1.65%	1.05%	1.81%	8.61%	91.73%	L+354	5.45%	5.00 yrs	6.28%	462bp
International	4.19%	1.43%	0.87%	2.26%	9.02%	8.27%	L+309	5.04%	5.30 yrs	6.40%	473bp

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan Leveraged Loan Index profile

Top 30 borrowers

Top 30 borrowers	Market Value	Market Weight	Number of Loans	Industry	Rating	MV Weighted Yield to Maturity	Ticker	Loan Only	Region
CSC Holdings	7.7	0.66%	4	Cable/Satellite	BB	3.95%	CSCHLD	N	Domestic
Transdigm	7.5	0.64%	3	Industrials	Split BB	4.06%	TDG	N	Domestic
Asurion Corporation	7.5	0.64%	3	Services	Split BB	4.47%	ASUCOR	Y	Domestic
Financial & Risk US Holdings	6.5	0.56%	1	Services	B	4.61%	FINRSK	N	Domestic
Berry Global	6.3	0.54%	3	Paper/Packaging	Split BBB	3.54%	BERY	N	Domestic
Charter Communications Holdings	6.3	0.54%	2	Cable/Satellite	Split BBB	3.21%	CHTR	N	Domestic
SFR Group SA	6.0	0.51%	3	Cable/Satellite	B	5.33%	SFRFP	N	Europe
CenturyLink	5.9	0.50%	1	Telecommunications	Split BBB	4.29%	CTL	N	Domestic
Sprint Nextel Corporation	5.8	0.50%	2	Telecommunications	BB	4.72%	S	N	Domestic
Restaurant Brands	5.4	0.46%	1	Food/Beverages	BB	3.38%	BCULC	N	Domestic
SS&C Technologies	5.2	0.45%	3	Technology	BB	3.69%	SSNC	N	Domestic
American Airlines Group	5.2	0.44%	4	Transportation	BB	3.49%	AAL	N	Domestic
Bausch Health Companies	5.2	0.44%	2	Healthcare	BB	4.42%	BHCCN	N	Domestic
Caesars Resort Collection	4.6	0.39%	1	Gaming/Leisure	BB	4.38%	CGPHLC	N	Domestic
Envision Healthcare	4.6	0.39%	1	Healthcare	B	11.38%	EVHC	N	Domestic
Hub International	4.4	0.38%	2	Financial	B	4.75%	HBGCN	N	Domestic
Sedgwick CMS Holdings	4.3	0.37%	3	Services	B	5.95%	SEDGEW	Y	Domestic
Micro Focus	4.3	0.37%	3	Technology	Split BB	3.99%	MCROLN	Y	Europe
Nexstar Broadcasting	4.2	0.36%	2	Broadcasting	BB	4.13%	NXST	N	Domestic
Calpine	4.2	0.36%	4	Utility	BB	3.84%	CPN	N	Domestic
Univision Communications	4.2	0.36%	1	Broadcasting	B	5.03%	UVN	N	Domestic
Power Solutions	4.2	0.36%	1	Automotive	Split BB	5.10%	POWSOL	N	Domestic
Akzo Nobel Specialty Chemicals	4.2	0.36%	1	Chemicals	B	4.95%	SPCHEM	N	Europe
Bass Pro Shops	4.1	0.35%	1	Retail	B	6.90%	BASSPR	Y	Domestic
Scientific Games	4.1	0.35%	1	Gaming/Leisure	B	4.34%	SGMS	N	Domestic
Emdeon Inc	3.9	0.33%	1	Healthcare	B	4.19%	EM	N	Domestic
VVC Holding Corp	3.6	0.31%	1	Healthcare	B	6.03%	VVCHOL	Y	Domestic
US Foods	3.6	0.31%	2	Food/Beverages	BB	3.40%	USFOOD	N	Domestic
RegionalCare Hospital Partners	3.5	0.30%	1	Healthcare	B	5.90%	RGCARE	N	Domestic
ARAMARK Corporation	3.4	0.29%	3	Food/Beverages	Split BBB	3.29%	ARMK	N	Domestic
Total	**149.9**	**12.82%**	**61**		**Average**	**4.69%**			

Source: J.P. Morgan.

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J.P. Morgan Liquid Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Liquid Loan Index by industry											
Automotive	4.36%	1.07%	1.76%	2.75%	10.29%	2.08%	L+341	5.33%	6.02 yrs	5.17%	351bp
Broadcasting	5.24%	2.13%	2.49%	1.67%	11.99%	3.33%	L+315	5.08%	6.01 yrs	4.91%	325bp
Cable and Satellite	3.92%	2.83%	2.08%	1.84%	11.08%	6.40%	L+278	4.72%	6.11 yrs	4.41%	275bp
Chemicals	4.97%	1.75%	1.58%	2.66%	11.38%	3.45%	L+272	4.65%	5.30 yrs	4.38%	272bp
Consumer Products	-3.25%	2.84%	-0.73%	4.06%	2.78%	1.15%	L+388	5.94%	5.34 yrs	12.02%	1035bp
Diversified Media	2.32%	2.32%	0.61%	1.74%	7.16%	3.57%	L+332	5.23%	3.97 yrs	6.42%	475bp
Energy	9.93%	-2.76%	-18.56%	-3.24%	-15.77%	2.00%	L+397	5.91%	5.19 yrs	19.21%	1752bp
Financial	4.59%	2.09%	1.99%	2.10%	11.20%	6.69%	L+314	5.05%	4.60 yrs	4.92%	326bp
Food and Beverages	4.46%	1.75%	1.98%	1.57%	10.10%	4.37%	L+229	4.21%	5.53 yrs	4.35%	269bp
Gaming Lodging And Leisure	4.33%	2.02%	2.02%	1.75%	10.49%	8.59%	L+257	4.52%	5.02 yrs	4.13%	247bp
Healthcare	4.70%	0.94%	-0.57%	3.24%	8.48%	14.10%	L+336	5.28%	5.22 yrs	6.17%	451bp
Housing	5.02%	2.47%	2.56%	2.78%	13.43%	1.46%	L+297	4.89%	5.21 yrs	4.60%	294bp
Industrials	4.93%	2.05%	1.72%	4.46%	13.78%	2.92%	L+303	4.93%	4.39 yrs	5.10%	344bp
Metals and Mining	0.61%	-16.09%	-30.58%	-3.31%	-43.34%	0.28%	L+400	5.93%	5.50 yrs	15.90%	1424bp
Paper and Packaging	4.72%	1.01%	2.50%	1.30%	9.82%	1.14%	L+293	4.88%	3.57 yrs	4.60%	294bp
Retail	7.31%	3.66%	1.61%	5.07%	18.76%	4.72%	L+371	5.64%	3.94 yrs	7.27%	561bp
Services	4.38%	1.78%	2.48%	2.33%	11.41%	9.01%	L+341	5.32%	5.64 yrs	5.21%	355bp
Technology	4.75%	1.10%	1.22%	2.99%	10.40%	15.45%	L+330	5.21%	4.68 yrs	5.62%	396bp
Telecommunications	5.12%	1.62%	1.75%	0.40%	9.12%	4.94%	L+328	5.19%	4.68 yrs	9.89%	823bp
Transportation	4.52%	1.61%	2.10%	1.43%	9.98%	2.34%	L+205	3.91%	5.90 yrs	3.56%	190bp
Utility	4.48%	2.22%	1.17%	0.61%	8.71%	2.00%	L+280	4.71%	5.25 yrs	4.95%	329bp
J.P. Morgan Liquid Loan Index	**4.65%**	**1.68%**	**1.10%**	**2.34%**	**10.09%**	**100.00%**	**L+313**	**5.05%**	**5.07 yrs**	**5.87%**	**420bp**

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan Liquid Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Liquid Loan Index by rating											
BBB	3.96%	1.70%	1.94%	1.24%	9.10%	3.63%	L+177	3.69%	5.27 yrs	3.27%	161bp
Split BBB	4.71%	1.69%	2.15%	1.26%	10.13%	7.40%	L+213	4.04%	5.83 yrs	3.63%	197bp
BB	4.99%	1.74%	1.77%	1.45%	10.28%	20.37%	L+251	4.43%	5.65 yrs	4.24%	258bp
Split BB	4.58%	1.57%	1.36%	1.79%	9.59%	11.49%	L+287	4.79%	4.71 yrs	4.72%	306bp
B	4.22%	1.72%	1.04%	3.08%	10.42%	52.63%	L+357	5.50%	4.97 yrs	5.92%	426bp
Split B/CCC	8.78%	-0.45%	-9.21%	3.98%	2.22%	3.82%	L+400	5.92%	3.49 yrs	18.95%	1728bp
Not Rated	6.21%	2.41%	5.28%	-7.17%	6.30%	0.66%	L+521	7.12%	1.54 yrs	34.99%	3334bp
J.P. Morgan Liquid Loan Index by Capital Structure											
Loan Only	4.56%	1.87%	1.11%	2.68%	10.58%	33.09%	L+343	5.35%	4.99 yrs	7.07%	541bp
Loan & Bond	4.69%	1.58%	1.10%	2.16%	9.83%	66.91%	L+298	4.90%	5.12 yrs	5.27%	361bp
J.P. Morgan Liquid Loan Index by Cov-Lite											
Cov-Lite	4.66%	1.80%	1.40%	2.53%	10.77%	89.53%	L+312	5.04%	5.07 yrs	5.45%	379bp
Not Cov-Lite	4.59%	0.81%	-1.17%	0.67%	4.91%	10.47%	L+320	5.12%	5.08 yrs	9.45%	779bp
J.P. Morgan Liquid Loan Index by Libor Floor											
Libor Floor	4.74%	1.65%	0.07%	2.59%	9.30%	33.26%	L+343	5.36%	4.18 yrs	7.95%	629bp
No Libor Floor	4.58%	1.70%	1.68%	2.25%	10.58%	66.74%	L+298	4.90%	5.52 yrs	4.83%	317bp
J.P. Morgan Liquid Loan Index by Region											
Domestic	4.67%	1.73%	1.20%	2.33%	10.27%	89.26%	L+316	5.08%	5.01 yrs	5.74%	408bp
International	4.50%	1.27%	0.28%	2.39%	8.67%	10.74%	L+287	4.82%	5.59 yrs	6.87%	521bp

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

Peter D. Acciavatti (1-212) 270-9633
Tony Linares (1-212) 270-3285
Nelson R. Jantzen (1-212) 270-1169

J.P. Morgan Liquid Loan Index profile

Top 30 borrowers

Top 30 borrowers	Market Value	Market Weight	Industry	Rating	MV Weighted Yield to Maturity	Ticker	Loan Only	Region
Financial & Risk US Holdings	6.5	1.46%	Services	B	4.61%	FINRSK	N	Domestic
CenturyLink	5.9	1.32%	Telecommunications	Split BBB	4.29%	CTL	N	Domestic
Restaurant Brands	5.4	1.20%	Food/Beverages	BB	3.38%	BCULC	N	Domestic
Caesars Resort Collection	4.6	1.03%	Gaming/Leisure	BB	4.38%	CGPHLC	N	Domestic
Envision Healthcare	4.6	1.03%	Healthcare	B	11.38%	EVHC	N	Domestic
Univision Communications	4.2	0.94%	Broadcasting	B	5.03%	UVN	N	Domestic
Power Solutions	4.2	0.94%	Automotive	Split BB	5.10%	POWSOL	N	Domestic
Akzo Nobel Specialty Chemicals	4.2	0.94%	Chemicals	B	4.95%	SPCHEM	N	Europe
Bass Pro Shops	4.1	0.93%	Retail	B	6.90%	BASSPR	Y	Domestic
Scientific Games	4.1	0.92%	Gaming/Leisure	B	4.34%	SGMS	N	Domestic
Bausch Health Companies	3.9	0.87%	Healthcare	BB	4.48%	BHCCN	N	Domestic
Emdeon Inc	3.9	0.86%	Healthcare	B	4.19%	EM	N	Domestic
Sprint Nextel Corporation	3.9	0.86%	Telecommunications	BB	4.61%	S	N	Domestic
Charter Communications Holdings	3.8	0.86%	Cable/Satellite	Split BBB	3.22%	CHTR	N	Domestic
VVC Holding Corp	3.6	0.82%	Healthcare	B	6.03%	VVCHOL	Y	Domestic
RegionalCare Hospital Partners	3.5	0.80%	Healthcare	B	5.90%	RGCARE	N	Domestic
Transdigm	3.5	0.79%	Industrials	Split BB	4.05%	TDG	N	Domestic
Virgin Media	3.3	0.74%	Cable/Satellite	BB	4.01%	VMED	N	Europe
Misys PLC	3.3	0.74%	Technology	B	5.61%	MSYLN	Y	Europe
Diamond Sports Group	3.3	0.74%	Broadcasting	BB	4.99%	DSPORT	N	Domestic
BMC Software	3.2	0.72%	Technology	B	6.38%	BMC	N	Domestic
Reynolds Group Issuer	3.2	0.72%	Paper/Packaging	B	4.33%	REYNOL	N	Domestic
Commscope	3.2	0.72%	Technology	Split BB	4.72%	COMM	N	Domestic
Verscend Holding Corp	3.2	0.72%	Healthcare	B	5.93%	VCVHHO	N	Domestic
Asurion Corporation	3.2	0.72%	Services	Split BB	4.48%	ASUCOR	Y	Domestic
PetSmart	3.2	0.72%	Retail	B	6.62%	PETM	N	Domestic
Endo Health Solutions	3.2	0.71%	Healthcare	B	7.80%	ENDP	N	Domestic
Hub International	3.2	0.71%	Financial	B	4.45%	HBGCN	N	Domestic
Pharmaceutical Product Development	3.1	0.70%	Healthcare	Split BB	4.20%	PPDI	N	Domestic
ADT Corp	3.1	0.70%	Services	BB	4.98%	ADT	N	Domestic
Total	**115.6**	**25.94%**		**Average**	**5.18%**			

Source: J.P. Morgan.

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J.P. Morgan Second Lien Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Leveraged Loan Index by industry											
Automotive	2.38%	2.84%	1.22%	2.24%	8.95%	3.16%	L+648	8.41%	6.04 yrs	9.50%	784bp
Broadcasting	6.19%	2.81%	1.85%	-6.65%	3.80%	0.51%	L+706	8.98%	6.46 yrs	13.20%	1154bp
Cable and Satellite	6.83%	4.98%	1.78%	-	-	-	-	-	-	-	-
Chemicals	2.53%	1.13%	0.14%	-2.78%	0.94%	2.57%	L+805	9.98%	5.53 yrs	16.22%	1456bp
Consumer Products	-1.32%	1.68%	-0.20%	1.78%	1.91%	3.19%	L+841	10.36%	5.73 yrs	17.67%	1601bp
Diversified Media	2.63%	3.81%	4.23%	3.03%	14.41%	4.28%	L+714	9.00%	4.16 yrs	12.59%	1093bp
Energy	4.46%	-6.51%	-13.69%	0.34%	-15.43%	2.26%	L+701	8.95%	4.57 yrs	24.13%	2247bp
Financial	3.90%	2.28%	2.41%	2.38%	11.42%	4.22%	L+742	9.36%	6.24 yrs	9.83%	817bp
Food and Beverages	3.27%	2.40%	-0.65%	2.68%	7.88%	2.70%	L+738	9.31%	4.09 yrs	15.96%	1428bp
Gaming Lodging And Leisure	4.36%	3.49%	2.92%	0.61%	11.84%	1.26%	L+847	10.17%	4.53 yrs	12.71%	1105bp
Healthcare	2.83%	1.37%	1.74%	1.68%	7.83%	12.83%	L+821	10.13%	5.98 yrs	12.51%	1084bp
Housing	3.92%	3.47%	3.41%	2.87%	14.40%	0.67%	L+842	10.35%	5.22 yrs	10.83%	917bp
Industrials	4.27%	1.99%	1.47%	-0.91%	6.91%	8.49%	L+828	10.20%	5.63 yrs	13.63%	1198bp
Metals and Mining	5.03%	0.02%	-2.17%	5.86%	8.79%	0.36%	L+887	10.81%	4.58 yrs	17.50%	1582bp
Paper and Packaging	0.33%	4.76%	0.64%	-1.35%	4.35%	2.01%	L+778	9.69%	5.18 yrs	14.73%	1307bp
Retail	4.37%	4.29%	-10.50%	4.37%	1.68%	1.06%	L+801	9.96%	5.79 yrs	19.84%	1818bp
Services	3.66%	2.30%	0.66%	-0.82%	5.86%	21.48%	L+769	9.58%	5.88 yrs	11.93%	1027bp
Technology	2.76%	2.68%	0.30%	2.17%	8.14%	24.16%	L+780	9.73%	6.02 yrs	12.60%	1094bp
Telecommunications	15.03%	10.18%	24.16%	-31.56%	7.69%	1.63%	L+838	10.31%	6.17 yrs	23.90%	2225bp
Transportation	2.68%	3.65%	2.18%	1.33%	10.19%	2.55%	L+846	10.39%	6.24 yrs	12.98%	1132bp
Utility	4.61%	3.08%	-7.08%	2.97%	3.18%	0.62%	L+725	9.23%	3.93 yrs	13.05%	1140bp
J.P. Morgan Second Lien Loan Index	**3.47%**	**2.50%**	**1.33%**	**-0.65%**	**6.76%**	**100.00%**	**L+782**	**9.73%**	**5.72 yrs**	**13.25%**	**1159bp**

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan Second Lien Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan Second Lien Loan Index by rating											
BBB	2.94%	-	-	-	-	-	-	-	-	-	-
Split BBB	-	-	1.03%	-	-	-	-	-	-	-	-
BB	-	-	-	-	-	0.73%	L+200	3.95%	5.25 yrs	3.65%	199bp
Split BB	4.88%	-2.44%	-31.83%	28.91%	-10.09%	0.75%	L+675	8.73%	5.91 yrs	19.98%	1832bp
B	4.37%	2.48%	1.65%	2.20%	11.11%	8.65%	L+670	8.66%	5.71 yrs	8.66%	700bp
Split B/CCC	2.68%	1.92%	0.50%	0.50%	5.70%	84.17%	L+796	9.88%	5.69 yrs	13.36%	1170bp
Not Rated	16.86%	11.02%	16.25%	-17.37%	24.62%	4.93%	L+811	10.03%	6.91 yrs	10.62%	896bp
J.P. Morgan Second Lien Loan Index by Capital Structure											
Loan Only	3.45%	2.49%	1.34%	-0.71%	6.69%	98.66%	L+785	9.77%	5.73 yrs	13.32%	1167bp
Loan & Bond	4.36%	3.15%	0.72%	3.18%	11.86%	1.34%	L+523	6.97%	5.06 yrs	7.52%	586bp
J.P. Morgan Second Lien Loan Index by Cov-Lite											
Cov-Lite	2.86%	2.25%	0.15%	0.94%	6.32%	84.23%	L+776	9.69%	5.77 yrs	13.32%	1167bp
Not Cov-Lite	7.08%	3.83%	7.02%	-7.62%	9.91%	15.77%	L+813	9.96%	5.48 yrs	12.83%	1117bp
J.P. Morgan Second Lien Loan Index by Libor Floor											
Libor Floor	3.39%	2.28%	1.18%	-2.31%	4.52%	51.78%	L+794	9.86%	4.95 yrs	15.25%	1359bp
No Libor Floor	3.62%	2.82%	1.48%	1.31%	9.54%	48.22%	L+768	9.60%	6.56 yrs	11.09%	943bp
J.P. Morgan Second Lien Loan Index by Region											
Domestic	3.38%	2.51%	1.36%	-0.92%	6.43%	94.09%	L+783	9.74%	5.75 yrs	13.40%	1174bp
International	4.89%	2.35%	0.88%	3.75%	12.35%	5.91%	L+763	9.58%	5.36 yrs	10.76%	910bp

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan Second Lien Loan Index profile

Top 30 borrowers

Top 30 borrowers	Market Value	Market Weight	Number of Loans	Industry	Rating	MV Weighted Yield to Maturity	Ticker	Loan Only	Region
Asurion Corporation	3.3	6.10%	1	Services	B	7.73%	ASUCOR	Y	Domestic
Misys PLC	1.2	2.22%	1	Technology	CCC/Split CCC	10.02%	MSYLN	Y	Europe
Kronos Incorporated	1.0	1.86%	1	Technology	CCC/Split CCC	9.36%	KRON	Y	Domestic
VVC Holding Corp	0.8	1.47%	1	Healthcare	Not Rated	10.07%	VVCHOL	Y	Domestic
Direct ChassisLink	0.8	1.37%	1	Transportation	Split B	13.64%	DIRCHA	Y	Domestic
Advantage Sales & Marketing	0.7	1.23%	1	Diversified Media	CCC/Split CCC	13.89%	ADVSAL	Y	Domestic
Vertafore	0.7	1.20%	1	Technology	CCC/Split CCC	9.42%	VERTAF	Y	Domestic
Hyland Software Inc	0.6	1.15%	1	Technology	CCC/Split CCC	8.36%	HSI	Y	Domestic
Caliber Collision	0.6	1.09%	1	Automotive	CCC/Split CCC	9.30%	CHHOLD	Y	Domestic
Internet Brands	0.6	1.05%	1	Diversified Media	CCC/Split CCC	9.31%	INET	Y	Domestic
Applied Systems	0.6	1.03%	1	Technology	CCC/Split CCC	8.16%	APPSYS	Y	Domestic
McAfee	0.5	0.96%	1	Technology	Split B	10.26%	INTC	Y	Domestic
Capital Automotive	0.5	0.91%	1	Financial	Split B	7.78%	CARS	Y	Domestic
DigiCert Inc	0.5	0.86%	1	Technology	B	9.85%	DIGICT	Y	Domestic
Endemol NV	0.5	0.84%	1	Diversified Media	CCC/Split CCC	10.58%	EMLNA	Y	Europe
Travelport LLC	0.4	0.76%	1	Services	CCC/Split CCC	17.90%	TPORT	Y	Domestic
Encino Acq. Partners Holdings	0.4	0.75%	1	Energy	Split BB	19.98%	ENCIAC	Y	Domestic
Goodyear Tire & Rubber	0.4	0.73%	1	Automotive	BB	3.65%	GT	N	Domestic
Blackhawk Network Holdings	0.4	0.73%	1	Services	CCC/Split CCC	8.88%	HAWK	Y	Domestic
Radiology Partners	0.4	0.72%	1	Healthcare	Split B	10.91%	RADPAR	Y	Domestic
Ellie Mae	0.4	0.70%	1	Financial	Not Rated	9.76%	ELLI	Y	Domestic
Authentic Brands	0.4	0.69%	1	Consumer Products	CCC/Split CCC	9.78%	AUTBRA	Y	Domestic
CCC Information Services Group	0.4	0.69%	1	Technology	CCC/Split CCC	8.64%	CCCG	Y	Domestic
DiscoverOrg	0.4	0.68%	1	Technology	CCC/Split CCC	10.16%	DISORG	Y	Domestic
PowerSchool	0.4	0.66%	1	Technology	CCC/Split CCC	8.79%	SEVACQ	Y	Domestic
Solenis International	0.4	0.66%	1	Chemicals	CCC/Split CCC	14.40%	SOLEIN	Y	Domestic
MED ParentCo LP	0.4	0.65%	1	Healthcare	CCC/Split CCC	10.28%	CAPVIS	Y	Domestic
TriTech Software Systems	0.4	0.65%	1	Technology	CCC/Split CCC	11.76%	TRITEC	Y	Domestic
Alphabet Holding Co	0.4	0.64%	1	Retail	CCC/Split CCC	14.59%	NTY	Y	Domestic
TKC Holdings Inc	0.3	0.63%	1	Services	CCC/Split CCC	13.95%	TKCHOL	Y	Domestic
Total	**18.4**	**33.67%**	**30**		**Average**	**10.71%**			

Source: J.P. Morgan.

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J.P. Morgan BB/B Loan Index profile

	Total Return					As of 31-Dec19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan BB/B Loan Index by industry											
Automotive	3.13%	1.45%	1.47%	2.35%	8.65%	2.42%	L+366	5.59%	5.17 yrs	5.88%	422bp
Broadcasting	4.68%	2.22%	2.03%	1.15%	10.43%	2.71%	L+294	4.86%	5.60 yrs	4.80%	314bp
Cable and Satellite	3.87%	2.67%	2.10%	1.69%	10.71%	4.48%	L+279	4.69%	5.95 yrs	4.47%	281bp
Chemicals	3.96%	1.58%	1.19%	1.99%	8.98%	3.88%	L+306	4.98%	5.19 yrs	5.10%	343bp
Consumer Products	2.39%	1.54%	0.93%	1.41%	6.41%	2.25%	L+373	5.68%	5.26 yrs	6.66%	500bp
Diversified Media	3.25%	2.50%	1.06%	2.45%	9.58%	3.11%	L+352	5.42%	4.76 yrs	6.02%	436bp
Energy	4.80%	0.90%	-3.28%	0.77%	3.05%	2.93%	L+442	6.35%	5.09 yrs	7.96%	630bp
Financial	3.91%	1.91%	1.81%	1.96%	9.92%	5.94%	L+331	5.23%	5.13 yrs	5.10%	344bp
Food and Beverages	3.85%	2.00%	1.53%	1.71%	9.39%	4.36%	L+294	4.86%	5.33 yrs	5.19%	353bp
Gaming Lodging And Leisure	4.12%	1.93%	1.84%	1.58%	9.80%	7.09%	L+292	4.85%	5.06 yrs	4.71%	305bp
Healthcare	3.93%	1.61%	0.53%	2.72%	9.04%	11.73%	L+360	5.53%	5.13 yrs	6.15%	449bp
Housing	4.21%	2.21%	2.28%	2.45%	11.61%	2.62%	L+306	4.98%	5.06 yrs	4.86%	320bp
Industrials	4.00%	1.83%	1.52%	2.31%	10.00%	5.86%	L+348	5.40%	5.00 yrs	5.72%	406bp
Metals and Mining	3.54%	0.25%	-1.38%	-1.94%	0.38%	0.82%	L+383	5.75%	4.27 yrs	8.71%	704bp
Paper and Packaging	3.91%	1.71%	1.87%	2.12%	9.95%	2.76%	L+313	5.03%	4.96 yrs	5.25%	359bp
Retail	3.77%	0.13%	1.11%	2.34%	7.52%	3.06%	L+389	5.80%	4.35 yrs	6.87%	520bp
Services	3.79%	1.59%	1.63%	1.58%	8.85%	11.68%	L+352	5.44%	5.33 yrs	5.66%	400bp
Technology	4.21%	1.43%	1.34%	2.21%	9.48%	14.05%	L+348	5.40%	4.97 yrs	5.59%	393bp
Telecommunications	4.15%	1.13%	1.16%	1.61%	8.26%	3.43%	L+311	5.04%	5.06 yrs	6.12%	445bp
Transportation	3.96%	1.71%	1.45%	1.69%	9.09%	2.26%	L+307	4.96%	4.88 yrs	5.13%	347bp
Utility	3.75%	2.05%	1.04%	0.97%	8.01%	2.58%	L+356	5.48%	5.03 yrs	6.09%	443bp
J.P. Morgan BB/B Loan Index	**3.93%**	**1.66%**	**1.26%**	**1.92%**	**9.04%**	**100.00%**	**L+338**	**5.30%**	**5.12 yrs**	**5.64%**	**398bp**

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan BB/B Loan Index profile

	Total Return					As of 31-Dec19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan BB/B Loan Index by rating											
BBB	3.81%	1.62%	1.70%	1.20%	8.57%	2.29%	L+181	3.72%	5.41 yrs	3.31%	165bp
Split BBB	4.21%	1.67%	1.91%	1.31%	9.38%	6.39%	L+207	3.97%	5.56 yrs	3.62%	196bp
BB	4.45%	1.73%	1.63%	1.39%	9.50%	21.23%	L+260	4.51%	5.45 yrs	4.35%	268bp
Split BB	4.12%	1.80%	1.42%	1.43%	9.04%	9.61%	L+307	4.99%	4.76 yrs	4.98%	331bp
B	3.65%	1.61%	1.00%	2.27%	8.78%	60.47%	L+390	5.82%	5.01 yrs	6.51%	484bp
Split B/CCC	-	-	-	-	-	-	-	-	-	-	-
Not Rated	-	-	-	-	-	-	-	-	-	-	-
J.P. Morgan BB/B Loan Index by Capital Structure											
Loan Only	3.65%	1.72%	1.05%	1.79%	8.44%	54.49%	L+374	5.66%	5.10 yrs	6.19%	453bp
Loan & Bond	4.26%	1.58%	1.49%	2.06%	9.70%	45.51%	L+295	4.87%	5.15 yrs	4.98%	332bp
J.P. Morgan BB/B Loan Index by Cov-Lite											
Cov-Lite	3.98%	1.68%	1.36%	1.99%	9.29%	85.77%	L+333	5.25%	5.15 yrs	5.54%	387bp
Not Cov-Lite	3.69%	1.58%	0.67%	1.47%	7.60%	14.23%	L+370	5.62%	4.95 yrs	6.29%	462bp
J.P. Morgan BB/B Loan Index by Libor Floor											
Libor Floor	3.67%	1.56%	0.86%	1.92%	8.23%	36.85%	L+372	5.65%	4.37 yrs	6.52%	486bp
No Libor Floor	4.16%	1.73%	1.52%	1.92%	9.64%	63.15%	L+318	5.09%	5.56 yrs	5.13%	347bp
J.P. Morgan BB/B Loan Index by Region											
Domestic	3.92%	1.65%	1.24%	1.90%	8.97%	91.63%	L+341	5.33%	5.09 yrs	5.70%	404bp
International	4.07%	1.80%	1.41%	2.13%	9.73%	8.37%	L+298	4.93%	5.46 yrs	4.97%	330bp

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan BB/B Loan Index profile

Top 30 borrowers

Top 30 borrowers	Market Value	Market Weight	Number of Loans	Industry	Rating	MV Weighted Yield to Maturity	Ticker	Loan Only	Region
CSC Holdings	7.7	0.71%	4	Cable/Satellite	BB	3.95%	CSCHLD	N	Domestic
Transdigm	7.5	0.69%	3	Industrials	Split BB	4.06%	TDG	N	Domestic
Asurion Corporation	7.5	0.69%	3	Services	Split BB	4.47%	ASUCOR	Y	Domestic
Financial & Risk US Holdings	6.5	0.60%	1	Services	B	4.61%	FINRSK	N	Domestic
Berry Global	6.3	0.58%	3	Paper/Packaging	Split BBB	3.54%	BERY	N	Domestic
Charter Communications Holdings	6.3	0.58%	2	Cable/Satellite	Split BBB	3.21%	CHTR	N	Domestic
SFR Group SA	6.0	0.55%	3	Cable/Satellite	B	5.33%	SFRFP	N	Europe
CenturyLink	5.9	0.54%	1	Telecommunications	Split BBB	4.29%	CTL	N	Domestic
Sprint Nextel Corporation	5.8	0.54%	2	Telecommunications	BB	4.72%	S	N	Domestic
Restaurant Brands	5.4	0.49%	1	Food/Beverages	BB	3.38%	BCULC	N	Domestic
SS&C Technologies	5.2	0.48%	3	Technology	BB	3.69%	SSNC	N	Domestic
American Airlines Group	5.2	0.48%	4	Transportation	BB	3.49%	AAL	N	Domestic
Bausch Health Companies	5.2	0.48%	2	Healthcare	BB	4.42%	BHCCN	N	Domestic
Caesars Resort Collection	4.6	0.43%	1	Gaming/Leisure	BB	4.38%	CGPHLC	N	Domestic
Envision Healthcare	4.6	0.42%	1	Healthcare	B	11.38%	EVHC	N	Domestic
Hub International	4.4	0.41%	2	Financial	B	4.75%	HBGCN	N	Domestic
Micro Focus	4.3	0.39%	3	Technology	Split BB	3.99%	MCROLN	Y	Europe
Nexstar Broadcasting	4.2	0.39%	2	Broadcasting	BB	4.13%	NXST	N	Domestic
Calpine	4.2	0.39%	4	Utility	BB	3.84%	CPN	N	Domestic
Univision Communications	4.2	0.39%	1	Broadcasting	B	5.03%	UVN	N	Domestic
Power Solutions	4.2	0.39%	1	Automotive	Split BB	5.10%	POWSOL	N	Domestic
Akzo Nobel Specialty Chemicals	4.2	0.39%	1	Chemicals	B	4.95%	SPCHEM	N	Europe
Bass Pro Shops	4.1	0.38%	1	Retail	B	6.90%	BASSPR	Y	Domestic
Scientific Games	4.1	0.38%	1	Gaming/Leisure	B	4.34%	SGMS	N	Domestic
Emdeon Inc	3.9	0.36%	1	Healthcare	B	4.19%	EM	N	Domestic
VVC Holding Corp	3.6	0.34%	1	Healthcare	B	6.03%	VVCHOL	Y	Domestic
US Foods	3.6	0.34%	2	Food/Beverages	BB	3.40%	USFOOD	N	Domestic
RegionalCare Hospital Partners	3.5	0.33%	1	Healthcare	B	5.90%	RGCARE	N	Domestic
Sedgwick CMS Holdings	3.4	0.32%	2	Services	B	5.07%	SEDGEW	Y	Domestic
ARAMARK Corporation	3.4	0.31%	3	Food/Beverages	Split BBB	3.29%	ARMK	N	Domestic
Total	**149.0**	**13.76%**	**60**		**Average**	**4.66%**			

Source: J.P. Morgan.

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J.P. Morgan European Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan European Loan Index by industry											
Automotive	1.44%	1.72%	0.86%	1.11%	5.23%	2.13%	L+366	3.87%	6.00 yrs	3.81%	369bp
Broadcasting	1.74%	1.36%	0.94%	0.58%	4.71%	0.46%	L+350	3.50%	6.15 yrs	3.55%	354bp
Cable and Satellite	1.81%	1.77%	2.19%	0.56%	6.48%	3.87%	L+295	3.07%	7.61 yrs	3.20%	308bp
Chemicals	1.57%	1.10%	0.60%	0.91%	4.25%	8.48%	L+336	3.56%	5.11 yrs	4.24%	422bp
Consumer Products	2.06%	2.44%	0.60%	1.36%	6.60%	3.52%	L+395	4.05%	5.69 yrs	5.04%	503bp
Diversified Media	1.59%	1.82%	1.17%	0.94%	5.63%	3.22%	L+369	3.91%	4.27 yrs	4.23%	423bp
Energy	1.31%	2.17%	0.69%	1.50%	5.79%	0.71%	L+409	4.61%	5.56 yrs	4.76%	427bp
Financial	1.07%	0.93%	1.21%	1.27%	4.57%	3.67%	L+408	4.17%	4.88 yrs	4.28%	419bp
Food and Beverages	0.46%	1.73%	2.05%	1.00%	5.34%	5.20%	L+365	3.86%	5.21 yrs	5.51%	534bp
Gaming Lodging And Leisure	1.15%	1.84%	0.98%	0.70%	4.75%	6.04%	L+395	4.03%	5.32 yrs	4.43%	436bp
Healthcare	1.54%	1.44%	1.23%	0.52%	4.81%	15.52%	L+366	3.75%	5.32 yrs	3.88%	385bp
Housing	2.06%	1.59%	1.28%	0.95%	6.00%	3.48%	L+435	4.38%	5.62 yrs	4.96%	493bp
Industrials	1.24%	0.84%	-0.16%	0.22%	2.16%	5.38%	L+363	3.71%	5.27 yrs	4.74%	474bp
Metals and Mining	-	-	-	-	-	-	-	-	-	-	-
Paper and Packaging	1.92%	0.69%	0.79%	0.87%	4.34%	3.67%	L+366	3.69%	5.17 yrs	4.97%	495bp
Retail	2.37%	1.16%	1.27%	-1.65%	3.16%	4.70%	L+405	4.13%	4.77 yrs	6.75%	668bp
Services	1.53%	1.00%	1.42%	0.13%	4.14%	15.03%	L+369	3.78%	5.10 yrs	4.22%	413bp
Technology	2.28%	0.89%	2.02%	0.62%	5.92%	9.38%	L+367	4.02%	4.63 yrs	4.40%	431bp
Telecommunications	1.28%	0.69%	0.51%	2.00%	4.54%	4.12%	L+326	3.34%	5.94 yrs	3.46%	339bp
Transportation	1.59%	1.33%	0.95%	1.16%	5.12%	1.11%	L+431	4.31%	5.93 yrs	4.16%	416bp
Utility	-0.39%	2.18%	1.15%	1.16%	4.15%	0.30%	L+350	3.50%	5.10 yrs	3.77%	377bp
J.P. Morgan European Loan Index	**1.61%**	**1.29%**	**1.18%**	**0.62%**	**4.78%**	**100.00%**	**L+369**	**3.82%**	**5.28 yrs**	**4.42%**	**435bp**

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan European Loan Index profile

	Total Return					As of 31-Dec-19					
	1Q19	2Q19	3Q19	4Q19	2019	Market Weight	Margin	Coupon	Maturity	Yield	Spread
J.P. Morgan European Loan Index by rating											
BBB	1.31%	0.85%	-1.40%	0.54%	1.28%	0.17%	L+200	2.50%	5.33 yrs	3.26%	326bp
Split BBB	1.22%	1.02%	0.75%	0.79%	3.83%	1.08%	L+204	2.73%	4.54 yrs	2.58%	258bp
BB	1.57%	1.42%	1.01%	0.85%	4.93%	10.98%	L+272	2.89%	5.81 yrs	2.90%	286bp
Split BB	3.27%	1.13%	2.33%	-0.21%	6.65%	7.53%	L+310	3.13%	4.93 yrs	3.77%	375bp
B	1.65%	1.22%	1.23%	0.71%	4.89%	58.45%	L+381	3.93%	5.43 yrs	4.41%	434bp
Split B/CCC	-2.28%	4.92%	2.93%	0.06%	5.59%	1.18%	L+707	7.51%	5.30 yrs	14.85%	1480bp
Not Rated	1.24%	1.25%	0.69%	0.50%	3.73%	20.62%	L+399	4.12%	4.74 yrs	4.99%	491bp
JPM European Loan Index by Capital Structure											
Loan Only	1.48%	1.27%	1.10%	0.48%	4.40%	72.94%	L+382	3.96%	5.20 yrs	4.73%	465bp
Loan & Bond	1.97%	1.34%	1.41%	1.01%	5.85%	27.06%	L+334	3.45%	5.49 yrs	3.57%	354bp
J.P. Morgan European Loan Index by Cov-Lite											
Cov-Lite	1.63%	1.23%	1.25%	0.66%	4.85%	87.99%	L+362	3.76%	5.36 yrs	4.27%	422bp
Not Cov-Lite	1.53%	1.67%	0.73%	0.30%	4.28%	12.01%	L+418	4.31%	4.68 yrs	5.46%	535bp
J.P. Morgan European Loan Index by Libor Floor											
Libor Floor	1.75%	1.61%	1.52%	0.95%	5.96%	9.54%	L+311	3.87%	4.21 yrs	5.30%	529bp
No Libor Floor	1.59%	1.24%	1.14%	0.58%	4.64%	90.46%	L+375	3.82%	5.39 yrs	4.32%	426bp
J.P. Morgan European Loan Index by Region											
Domestic	1.90%	0.93%	1.18%	1.06%	5.17%	19.34%	L+345	3.64%	5.16 yrs	3.92%	391bp
International	1.54%	1.38%	1.18%	0.51%	4.69%	80.66%	L+375	3.87%	5.31 yrs	4.53%	446bp

Note: Yields and spreads are calculated to a 3-year takeout and use a forward curve.
Source: J.P. Morgan.

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J.P. Morgan European Loan Index profile

Top 30 borrowers

Top 30 borrowers	Market Value	Market Weight	Number of Loans	Industry	Rating	MV Weighted Yield to Maturity	Ticker	Loan Only	Region
Verisure Holding AB	3.5	1.58%	2	Services	Split BB	3.03%	VERISR	N	Europe
EG Group	3.2	1.46%	4	Retail	CCC/Split CCC	4.81%	OPTFIN	Y	Europe
Flora Food Group	3.2	1.44%	2	Food/Beverages	B	3.92%	SIGBID	Y	Europe
Nets Holding	2.7	1.23%	3	Services	Not Rated	3.82%	NETSDC	Y	Europe
Financial & Risk US Holdings	2.6	1.20%	1	Services	B	3.79%	FINRSK	N	Domestic
Techem GmbH	2.6	1.17%	1	Services	B	3.35%	TCHEN	N	Europe
Action Nederland	2.6	1.16%	1	Retail	B	3.41%	ACTINA	Y	Europe
Ziggo Bond Company BV	2.5	1.15%	1	Cable/Satellite	B	3.02%	ZIGGO	N	Europe
Springer Science Business Media	2.5	1.13%	1	Diversified Media	Not Rated	3.65%	SSBMDE	Y	Europe
SFR Group SA	2.3	1.06%	2	Cable/Satellite	B	3.38%	SFRFP	N	Europe
Ceva Sante Animale	2.3	1.05%	1	Healthcare	B	4.50%	CEVASA	Y	Europe
Ineos Group Holdings PLC	2.3	1.03%	1	Chemicals	BB	2.53%	INEGRP	N	Europe
Sivantos	2.2	1.01%	1	Healthcare	B	3.83%	AURLUX	Y	Europe
Power Solutions	2.2	1.00%	1	Automotive	Split BB	3.63%	POWSOL	N	Domestic
DKT Finance ApS	2.1	0.97%	1	Telecommunications	BB	2.57%	TDCDC	N	Europe
Ahlsell	2.1	0.94%	2	Housing	B	5.10%	AHSLSS	Y	Europe
Virgin Media	2.0	0.92%	3	Cable/Satellite	BB	3.32%	VMED	N	Europe
Akzo Nobel Specialty Chemicals	2.0	0.92%	1	Chemicals	B	3.54%	SPCHEM	N	Europe
Amer Sports	1.9	0.86%	1	Consumer Products	B	4.63%	ANTSPL	Y	Europe
Xella International	1.8	0.84%	2	Housing	B	4.52%	XELLA	Y	Europe
ION Trading Technologies	1.8	0.82%	1	Technology	B	5.87%	IONTRA	Y	Domestic
Sunshine Mid BV	1.8	0.82%	2	Paper/Packaging	B	3.26%	SUNSHM	N	Europe
Tipico	1.7	0.75%	2	Gaming/Leisure	Not Rated	3.74%	TACKLE	Y	Europe
Merlin Entertainments Group	1.7	0.75%	1	Gaming/Leisure	Split BB	2.75%	MERLLN	N	Europe
Froneri	1.6	0.74%	2	Food/Beverages	Split BB	2.31%	ICECR	Y	Europe
Masmovil Holdphone	1.6	0.74%	2	Telecommunications	Split BB	2.62%	MASSM	Y	Europe
Nidda Healthcare Holding	1.6	0.73%	3	Healthcare	B	4.00%	SAZGR	N	Europe
Elsan SAS	1.6	0.72%	1	Healthcare	B	3.20%	ELSGRO	Y	Europe
Kirk Beauty Sarl	1.6	0.71%	8	Retail	Split BB	10.99%		Y	Europe
Motor Fuel Group	1.6	0.71%	2	Energy	B	4.66%	MOTFUE	Y	Europe
Total	**65.2**	**29.62%**	**56**		**Average**	**3.93%**			

Source: J.P. Morgan.

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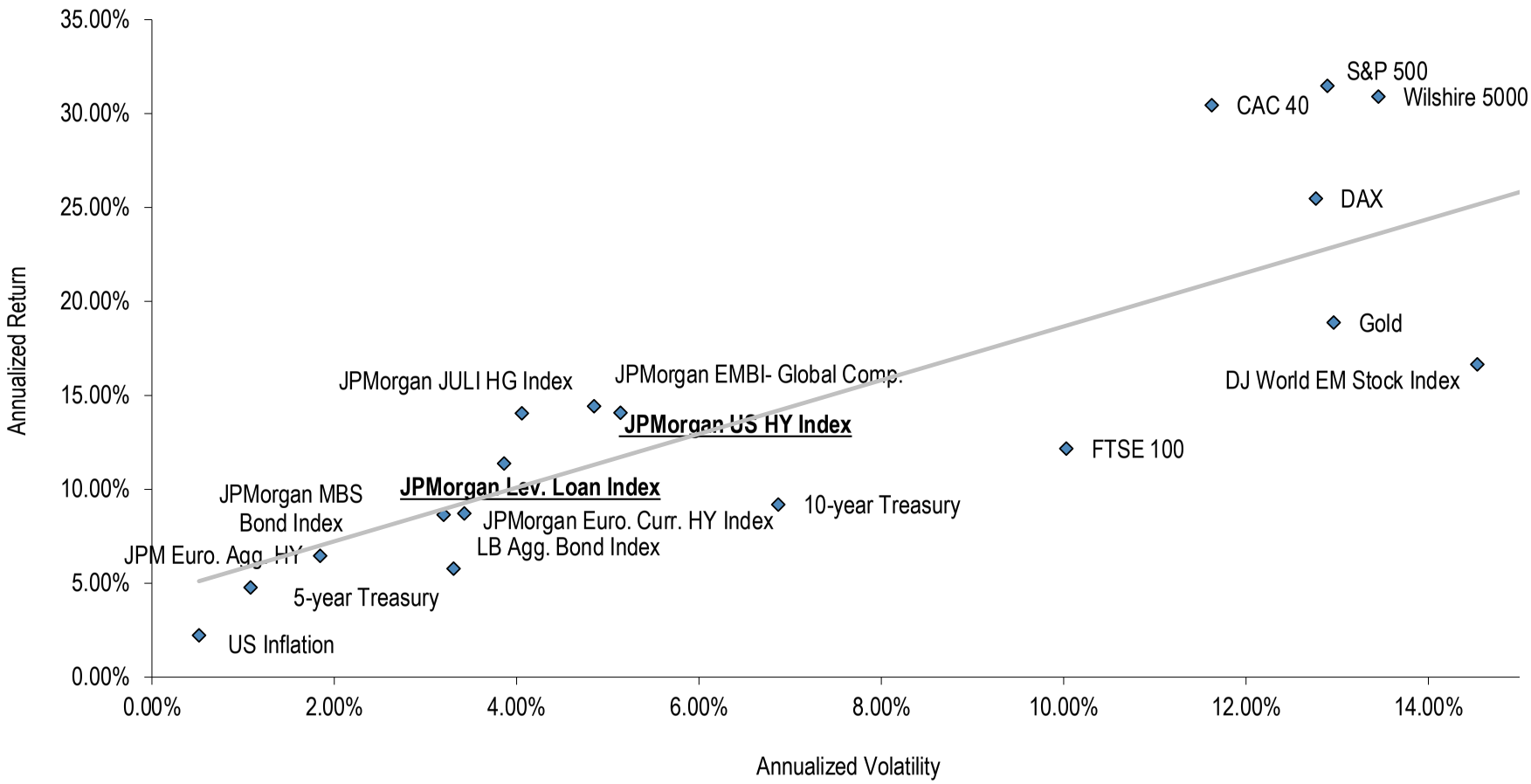
Risk and return of various assets

1-year as of December 31, 2019



Source: J.P. Morgan.

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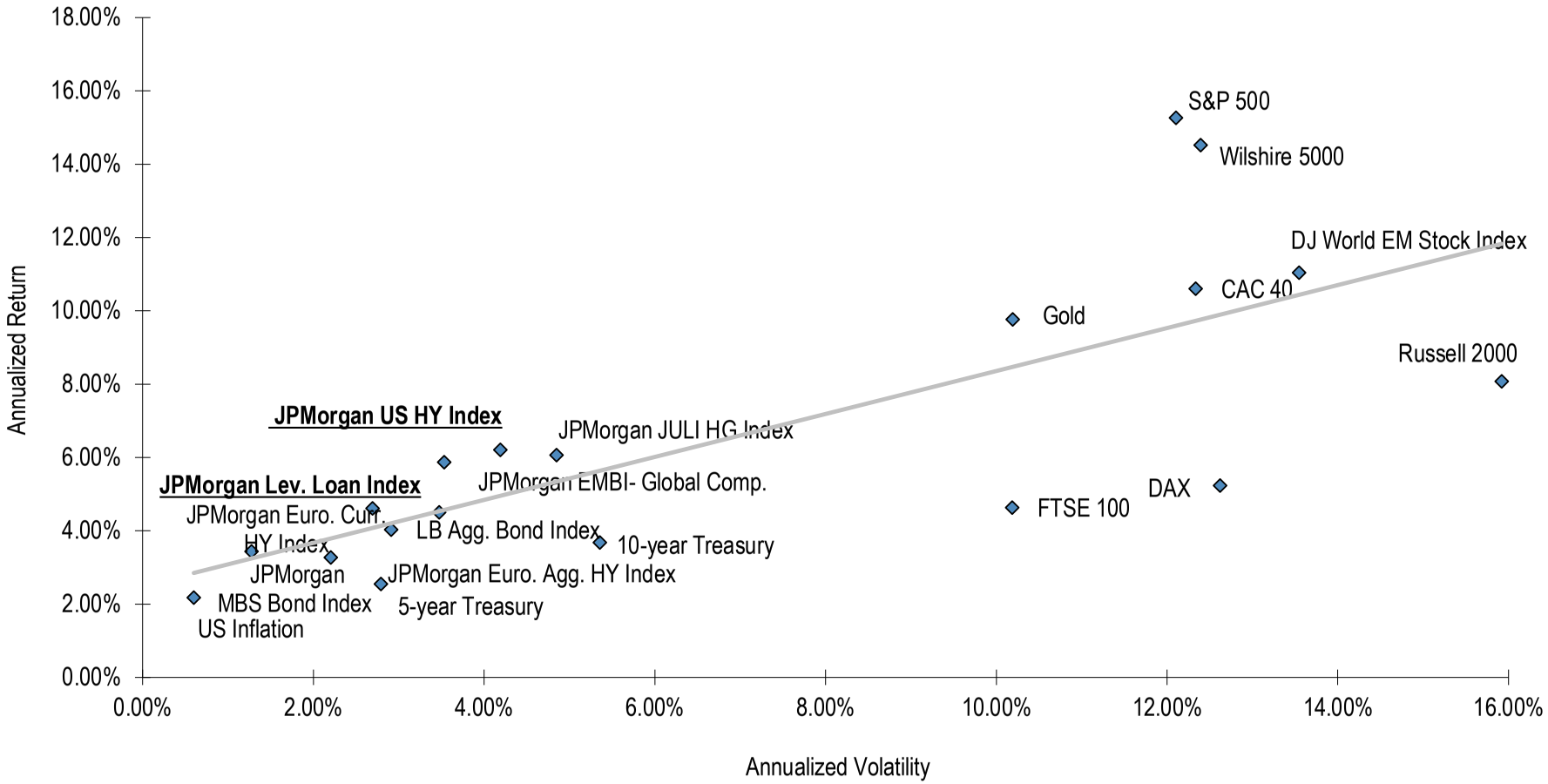
Risk and return of various assets

3-year as of December 31, 2019



Source: J.P. Morgan.

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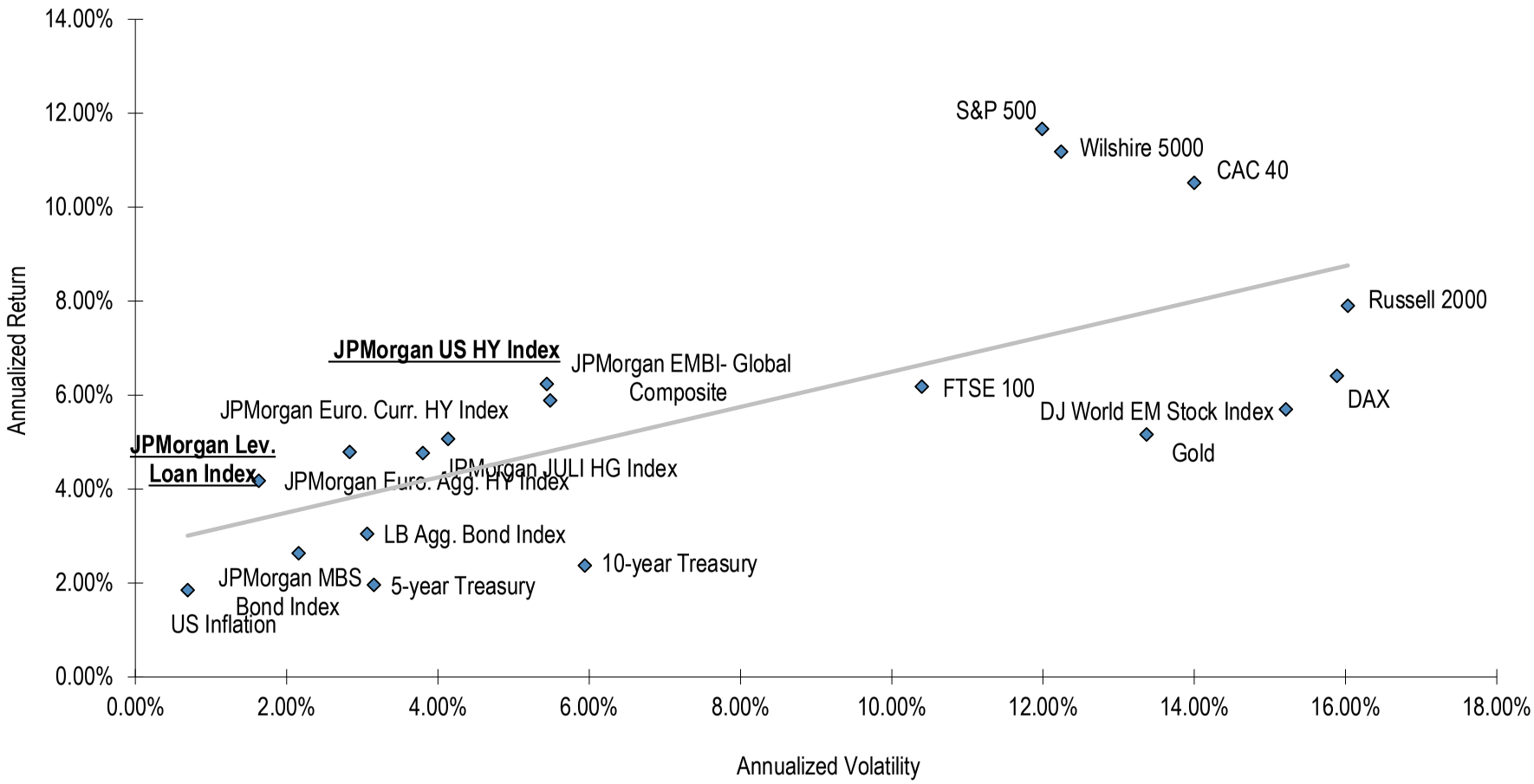
Risk and return of various assets

5-year as of December 31, 2019



Source: J.P. Morgan.

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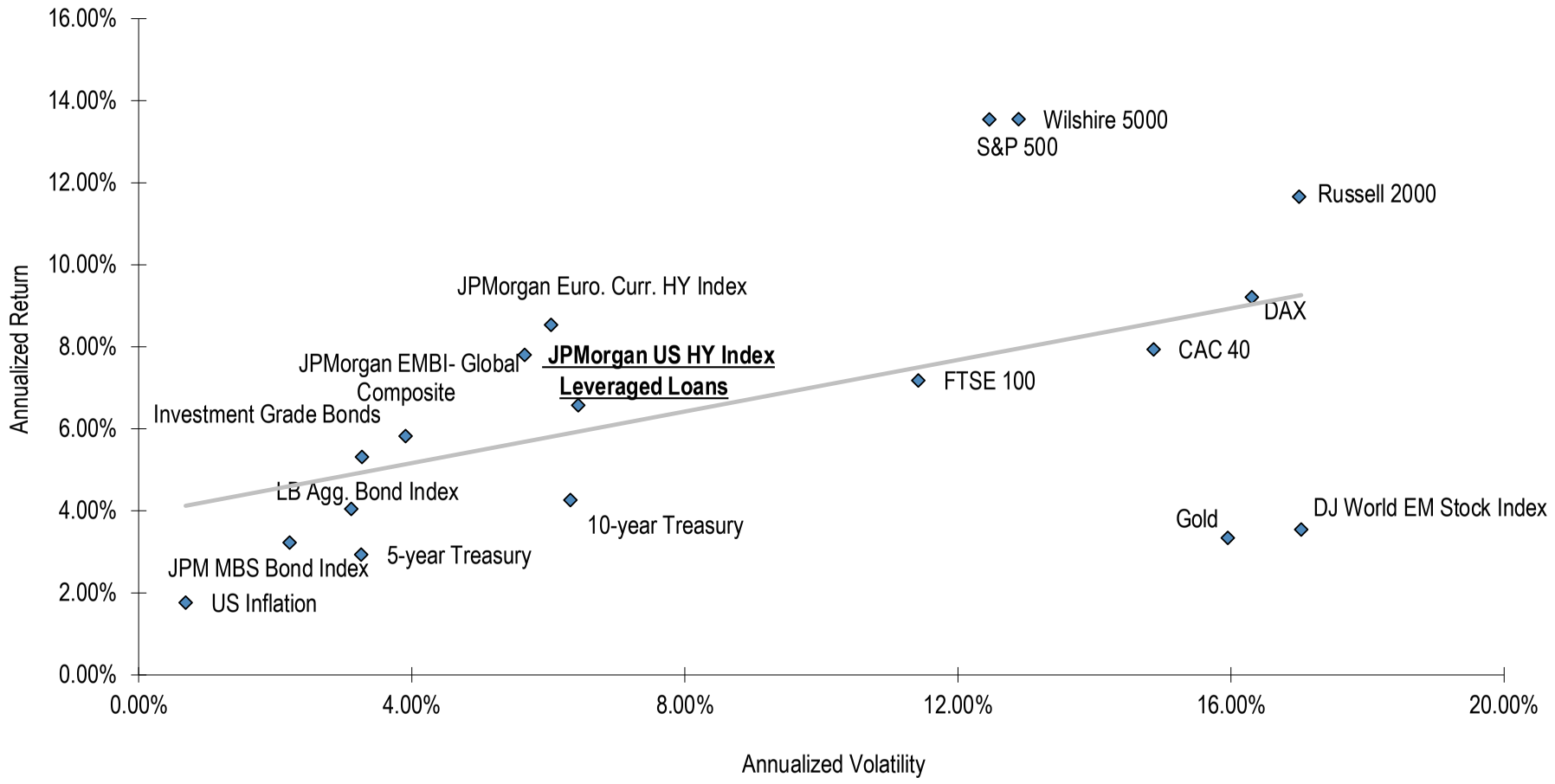
Risk and return of various assets

10-year as of December 31, 2019



Source: J.P. Morgan.

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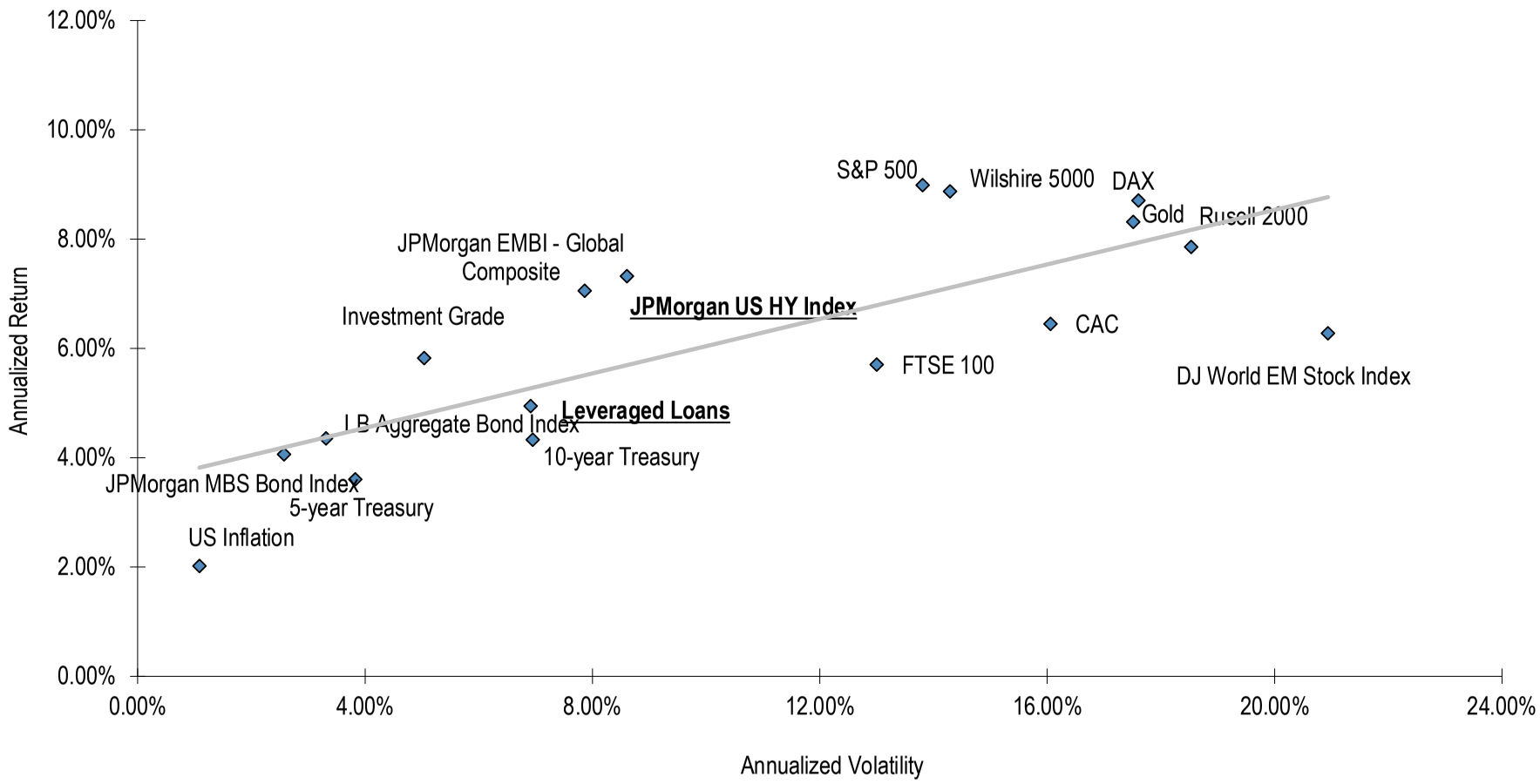
Risk and return of various assets

15-year as of December 31, 2019



Source: J.P. Morgan.

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Risk and return of various assets

As of December 31, 2019

	Average annual returns						Average annual volatility						Modified Sharpe Ratio [1]					
	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year
Fixed Income																		
5-year Treasury	5.78%	2.55%	1.96%	2.93%	3.60%	4.95%	3.31%	2.79%	3.15%	3.26%	3.83%	4.20%	1.75	0.91	0.62	0.90	0.94	1.18
10-year Treasury	9.19%	3.68%	2.37%	4.26%	4.33%	5.55%	6.87%	5.36%	5.94%	6.32%	6.95%	7.11%	1.34	0.69	0.40	0.67	0.62	0.78
JPMorgan MBS Index	6.46%	3.27%	2.64%	3.23%	4.06%	na	1.84%	2.20%	2.16%	2.21%	2.57%	na	3.50	1.48	1.22	1.46	1.58	na
LB Aggregate Bond Index	8.72%	4.03%	3.05%	4.05%	4.35%	5.69%	3.43%	2.91%	3.06%	3.11%	3.31%	3.55%	2.54	1.38	1.00	1.30	1.31	1.60
JPMorgan JULI High-Grade Index	14.05%	5.87%	4.76%	5.82%	5.82%	6.88%	4.06%	3.53%	3.80%	3.91%	5.04%	4.96%	3.46	1.66	1.25	1.49	1.16	1.39
Leveraged loans	**8.64%**	**4.61%**	**4.79%**	**5.32%**	**4.95%**	**5.34%**	**3.20%**	**2.69%**	**2.83%**	**3.27%**	**6.91%**	**5.48%**	**2.70**	**1.71**	**1.69**	**1.63**	**0.72**	**0.98**
JPMorgan US HY Index	**14.08%**	**6.21%**	**6.24%**	**7.80%**	**7.32%**	**7.87%**	**5.14%**	**4.19%**	**5.44%**	**5.65%**	**8.61%**	**7.79%**	**2.74**	**1.48**	**1.15**	**1.38**	**0.85**	**1.01**
Equity																		
S&P 500	31.48%	15.26%	11.66%	13.54%	8.99%	10.21%	12.89%	12.10%	11.99%	12.46%	13.81%	14.55%	2.44	1.26	0.97	1.09	0.65	0.70
Wilshire 5000	30.90%	14.52%	11.18%	13.55%	8.87%	9.97%	13.45%	12.39%	12.24%	12.89%	14.29%	14.93%	2.30	1.17	0.91	1.05	0.62	0.67
Russell 2000	23.79%	8.08%	7.90%	11.66%	7.86%	9.23%	17.90%	15.92%	16.03%	17.00%	18.53%	19.07%	1.33	0.51	0.49	0.69	0.42	0.48
International Equity																		
FTSE 100	12.16%	4.63%	6.18%	7.18%	5.70%	5.27%	10.03%	10.18%	10.40%	11.42%	13.00%	13.35%	1.21	0.45	0.59	0.63	0.44	0.39
CAC 40	30.45%	10.60%	10.52%	7.94%	6.45%	6.81%	11.62%	12.34%	14.00%	14.86%	16.06%	17.96%	2.62	0.86	0.75	0.53	0.40	0.38
DAX	25.48%	5.23%	6.41%	9.21%	8.31%	7.90%	12.77%	12.62%	15.89%	16.30%	17.51%	20.75%	2.00	0.41	0.40	0.56	0.47	0.38
Emerging Markets																		
JPMorgan EMBIG	14.42%	6.06%	5.88%	6.57%	7.05%	9.97%	4.85%	4.85%	5.48%	6.44%	7.86%	11.34%	2.97	1.25	1.07	1.02	0.90	0.88
Dow Jones World EM Stock Index	16.65%	11.04%	5.69%	3.54%	6.28%	3.51%	14.53%	13.55%	15.21%	17.03%	20.94%	23.01%	1.15	0.82	0.37	0.21	0.30	0.15
Other																		
Gold	18.87%	9.76%	5.16%	3.34%	8.71%	5.74%	12.96%	10.19%	13.37%	15.95%	17.61%	15.97%	1.46	0.96	0.39	0.21	0.49	0.36
US inflation	2.22%	2.18%	1.85%	1.76%	2.02%	2.20%	0.51%	0.60%	0.69%	0.69%	1.09%	0.93%	4.32	3.64	2.68	2.56	1.86	2.38

1. Annualized returns divided by the annualized standard deviation of return.
Sources: JPMorgan; Bloomberg.

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Risk and return of various assets

As of December 31, 2019 (continued)

	Average annual returns						Average annual volatility						Modified Sharpe Ratio [1]					
	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year	1 year	3 year	5 year	10 year	15 year	25 year
JPMorgan High-Yield Indices																		
US dollar HY Global	14.59%	6.60%	6.53%	7.79%	7.38%	na	4.70%	3.91%	5.27%	5.73%	8.71%	na	3.11	1.69	1.24	1.36	0.85	na
US dollar HY Developed Markets	14.60%	6.45%	6.36%	7.88%	7.40%	na	4.96%	4.12%	5.32%	5.63%	8.63%	na	2.94	1.56	1.20	1.40	0.86	na
US dollar European HY Index	18.68%	7.73%	7.94%	8.44%	8.22%	na	3.71%	3.85%	4.40%	6.19%	10.03%	na	5.03	2.01	1.81	1.36	0.82	na
Euro HY Index	11.03%	4.23%	4.74%	8.36%	7.24%	na	4.05%	3.56%	4.37%	6.17%	9.90%	na	2.72	1.19	1.09	1.36	0.73	na
Pound Sterling HY Index	13.88%	6.17%	6.74%	9.78%	8.69%	na	2.80%	3.31%	3.82%	5.39%	6.41%	na	4.95	1.86	1.77	1.81	1.36	na
European Currency HY Index	11.38%	4.50%	5.07%	8.54%	7.54%	na	3.86%	3.47%	4.14%	6.04%	9.25%	na	2.95	1.30	1.23	1.41	0.82	na
European Aggregate HY Index	13.07%	5.36%	5.97%	8.38%	7.62%	na	3.70%	3.40%	4.04%	5.93%	9.43%	na	3.54	1.58	1.48	1.41	0.81	na
HY100 Index	17.44%	7.65%	6.51%	7.89%	7.36%	na	5.46%	4.47%	5.70%	6.87%	10.45%	na	3.19	1.71	1.14	1.15	0.70	na
Institutional HY Index	15.24%	6.55%	5.97%	7.65%	6.88%	na	4.77%	3.87%	4.43%	4.87%	6.74%	na	3.19	1.69	1.35	1.57	1.02	na
JPM High-Yield Index Sectors																		
US BB-rated	15.61%	6.57%	5.94%	7.47%	7.19%	na	4.73%	3.84%	4.57%	4.86%	6.57%	na	3.30	1.71	1.30	1.54	1.09	na
US B-rated	15.69%	6.76%	5.75%	7.59%	6.37%	na	5.18%	4.25%	5.26%	5.55%	8.03%	na	3.03	1.59	1.09	1.37	0.79	na
US CCC-rated	11.25%	5.71%	6.28%	8.34%	7.29%	na	7.46%	6.34%	9.38%	9.65%	14.78%	na	1.51	0.90	0.67	0.86	0.49	na
USD domestic defaulted securities	-13.83%	-11.55%	1.25%	2.48%	6.94%	na	10.08%	10.25%	15.77%	13.76%	23.91%	na	-1.37	-1.13	0.08	0.18	0.29	na
JPMorgan Loan Indices																		
Second Lien Loan Index	6.76%	7.04%	7.30%	9.21%	na	na	3.18%	2.80%	4.49%	4.37%	na	na	2.12	2.51	1.62	2.11	na	na
Liquid Loan Index	10.09%	4.37%	4.65%	5.15%	na	na	4.14%	3.39%	3.35%	3.76%	na	na	2.44	1.29	1.39	1.37	na	na
Euro Loan Index	4.77%	3.44%	4.18%	na	na	na	1.08%	1.28%	1.63%	na	na	na	4.42	2.70	2.56	na	na	na
JPM Lev. Loan Index Sectors																		
BB-rated Loans	9.50%	4.31%	4.55%	4.56%	4.21%	na	3.13%	2.73%	2.50%	2.71%	5.65%	na	3.04	1.58	1.82	1.69	0.74	na
B-rated Loans	8.78%	4.94%	4.93%	5.53%	4.99%	na	3.38%	2.70%	3.05%	3.79%	8.39%	na	2.59	1.83	1.62	1.46	0.59	na
CCC-rated Loans	1.45%	4.74%	3.69%	6.28%	5.06%	na	7.30%	6.18%	9.98%	9.20%	14.03%	na	0.20	0.77	0.37	0.68	0.36	na

1. Annualized returns divided by the annualized standard deviation of return.
Sources: JPMorgan; Bloomberg.

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Risk and return of various assets

Annual returns

	2013		2014		2015		2016		2017		2018		2019	
	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility
Fixed Income														
5-year Treasury	-3.13%	3.03%	3.04%	2.51%	1.42%	3.36%	0.74%	4.13%	0.72%	1.67%	1.23%	3.11%	5.78%	3.31%
10-year Treasury	-7.73%	6.18%	10.92%	4.68%	1.00%	6.43%	-0.12%	7.47%	2.10%	3.07%	-0.03%	5.54%	9.19%	6.87%
JPMorgan MBS Index	-1.23%	2.90%	6.27%	2.41%	1.73%	1.55%	1.65%	2.62%	2.55%	1.37%	0.88%	2.96%	6.46%	1.84%
LB Aggregate Bond Index	-2.02%	3.19%	5.97%	2.31%	0.55%	2.95%	2.65%	3.71%	3.54%	1.52%	0.01%	3.12%	8.72%	3.43%
JPMorgan JULI High-Grade Index	-0.82%	4.73%	7.80%	3.02%	0.40%	3.62%	5.92%	4.75%	6.35%	1.67%	-2.16%	3.10%	14.05%	4.06%
JPMorgan US HY Index	**8.24%**	**4.79%**	**2.17%**	**4.60%**	**-4.99%**	**6.50%**	**18.91%**	**6.13%**	**7.59%**	**2.01%**	**-2.39%**	**3.74%**	**14.08%**	**5.14%**
Equity														
S&P 500	32.38%	8.48%	13.68%	8.26%	1.27%	13.69%	11.95%	10.29%	21.82%	3.94%	-4.39%	15.33%	31.48%	12.89%
Wilshire 5000	33.47%	8.69%	12.48%	8.80%	0.44%	13.26%	12.62%	11.28%	21.17%	3.83%	-5.30%	15.56%	30.90%	13.45%
Russell 2000	38.82%	10.90%	4.90%	15.52%	-4.46%	14.49%	21.28%	18.28%	14.63%	7.75%	-11.03%	19.33%	23.79%	17.90%
International Equity														
FTSE 100	19.17%	11.82%	1.04%	9.66%	-1.14%	12.97%	19.19%	8.05%	11.95%	8.58%	-8.78%	11.43%	12.16%	10.03%
CAC 40	22.23%	11.47%	2.71%	11.43%	11.94%	20.60%	8.88%	11.91%	12.73%	10.03%	-8.00%	13.88%	30.45%	11.62%
DAX	25.48%	11.25%	2.65%	11.09%	9.56%	23.65%	6.87%	16.88%	13.62%	9.42%	-18.26%	12.82%	25.48%	12.77%
Emerging Markets														
JPMorgan EMBIG	-6.58%	9.04%	5.53%	6.68%	1.23%	5.14%	10.19%	7.53%	9.32%	2.78%	-4.61%	5.21%	14.42%	4.85%
Dow Jones World EM Stock Index	-0.34%	12.13%	-0.18%	13.29%	-13.54%	17.56%	11.42%	17.44%	35.61%	6.65%	-13.45%	15.35%	16.65%	14.53%
Other														
Gold	-28.26%	19.40%	-1.51%	13.64%	-10.46%	14.63%	8.63%	19.63%	13.68%	8.73%	-2.14%	8.16%	18.87%	12.96%
US inflation	1.48%	0.70%	1.03%	0.63%	0.62%	1.02%	2.12%	0.45%	2.39%	0.75%	1.92%	0.54%	2.22%	0.53%
Leveraged loans	**5.60%**	**1.69%**	**2.05%**	**1.66%**	**0.55%**	**2.39%**	**9.78%**	**3.26%**	**4.25%**	**0.88%**	**1.08%**	**3.10%**	**8.64%**	**3.20%**

Sources: J.P. Morgan; Bloomberg

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Risk and return of various assets

Annual returns (continued)

	2013		2014		2015		2016		2017		2018		2019	
	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility
JPMorgan High-Yield Indices														
US dollar HY Global	7.42%	4.85%	1.67%	4.61%	-4.25%	6.74%	18.27%	5.90%	8.29%	2.02%	-2.37%	3.22%	14.59%	4.70%
US dollar HY Developed Markets	8.44%	4.76%	2.13%	4.57%	-4.53%	6.41%	18.22%	5.98%	7.80%	2.05%	-2.36%	3.63%	14.60%	4.96%
US dollar European HY Index	8.57%	5.22%	-0.66%	5.23%	3.88%	5.86%	12.82%	4.38%	8.58%	2.44%	-2.98%	2.92%	18.68%	3.71%
Euro HY Index	11.80%	4.17%	6.14%	2.83%	1.39%	5.77%	9.79%	5.06%	6.18%	1.70%	-3.95%	3.31%	11.03%	4.05%
Pound Sterling HY Index	13.35%	4.41%	4.67%	3.72%	4.78%	3.46%	10.50%	5.45%	7.41%	2.18%	-2.17%	3.40%	13.88%	2.80%
European Currency HY Index	11.97%	4.14%	5.52%	2.96%	2.32%	5.11%	9.63%	4.98%	6.30%	1.71%	-3.61%	3.25%	11.38%	3.86%
European Aggregate HY Index	10.64%	4.38%	2.95%	3.43%	3.30%	5.17%	10.60%	4.65%	7.16%	1.81%	-3.47%	2.81%	13.07%	3.70%
JPMorgan High-Yield Index by Rating														
US BB-rated	4.31%	5.45%	5.24%	5.10%	-0.81%	6.50%	11.16%	4.10%	7.26%	1.57%	-2.40%	2.95%	15.61%	4.73%
US B-rated	8.75%	4.74%	1.46%	4.41%	-4.97%	6.42%	14.38%	5.79%	6.70%	1.99%	-1.42%	3.86%	15.69%	5.18%
US CCC-rated	15.31%	5.36%	-2.16%	5.60%	-14.79%	8.89%	34.73%	12.91%	9.17%	4.36%	-2.75%	6.60%	11.25%	7.46%

Sources: J.P. Morgan; Bloomberg

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Risk and return of various assets

One-year correlation ended December 31, 2019

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPMorgan JULI High-Grade Index	JPMorgan US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM EMBI Global Composite	DJ World EM Stock Index	Gold	US Inflation
10-year Treasury	0.98												
JPMorgan MBS Bond Index	0.86	0.84											
LB Aggregate Bond Index	0.98	0.98	0.88										
JPMorgan JULI High-Grade Index	0.88	0.86	0.79	0.93									
JPMorgan US HY Index	**-0.21**	**-0.28**	**-0.10**	**-0.12**	**0.19**								
S&P 500	-0.47	-0.52	-0.35	-0.37	-0.03	**0.85**							
Wilshire 5000	-0.48	-0.53	-0.37	-0.38	-0.04	**0.86**	1.00						
Russell 2000	-0.58	-0.63	-0.46	-0.49	-0.18	**0.84**	0.95	0.96					
JPMorgan EMBI- Global Composite	0.20	0.14	0.40	0.30	0.53	**0.81**	0.56	0.57	0.54				
Dow Jones World EM Stock Index	-0.44	-0.55	-0.24	-0.38	-0.10	**0.83**	0.86	0.86	0.84	0.61			
Gold	0.52	0.46	0.31	0.51	0.64	**0.27**	0.09	0.08	0.04	0.54	0.16		
US Inflation	-0.06	-0.01	-0.02	-0.03	-0.03	**-0.36**	-0.05	-0.06	-0.15	-0.38	-0.15	-0.31	
Leveraged loans	**-0.51**	**-0.54**	**-0.44**	**-0.46**	**-0.25**	**0.79**	**0.60**	**0.63**	**0.70**	**0.45**	**0.57**	**-0.09**	**-0.35**

Source: J.P. Morgan.

Three-year correlation ended December 31, 2019

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPMorgan JULI High-Grade Index	JPMorgan US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM EMBI Global Composite	DJ World EM Stock Index	Gold	US Inflation
10-year Treasury	0.98												
JPMorgan MBS Bond Index	0.89	0.88											
LB Aggregate Bond Index	0.94	0.96	0.92										
JPMorgan JULI High-Grade Index	0.76	0.78	0.77	0.91									
JPMorgan US HY Index	**-0.19**	**-0.21**	**-0.06**	**0.00**	**0.32**								
S&P 500	-0.36	-0.34	-0.19	-0.16	0.15	**0.84**							
Wilshire 5000	-0.36	-0.34	-0.18	-0.16	0.14	**0.84**	1.00						
Russell 2000	-0.37	-0.36	-0.18	-0.20	0.04	**0.76**	0.89	0.92					
JPMorgan EMBI- Global Composite	0.26	0.26	0.42	0.45	0.66	**0.59**	0.37	0.36	0.23				
Dow Jones World EM Stock Index	-0.24	-0.27	-0.05	-0.09	0.15	**0.64**	0.72	0.70	0.55	0.57			
Gold	0.49	0.46	0.36	0.49	0.52	**0.13**	-0.04	-0.06	-0.19	0.51	0.28		
US Inflation	-0.25	-0.24	-0.30	-0.23	-0.16	**0.05**	0.17	0.16	0.07	-0.13	0.09	0.02	
Leveraged loans	**-0.48**	**-0.48**	**-0.40**	**-0.36**	**-0.07**	**0.81**	**0.68**	**0.69**	**0.65**	**0.27**	**0.42**	**-0.13**	**0.07**

Source: J.P. Morgan.

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Risk and return of various assets (continued)

Five-year correlation ended December 31, 2019

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPMorgan JULI High-Grade Index	JPMorgan US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM EMBI Global Composite	DJ World EM Stock Index	Gold	US Inflation
10-year Treasury	0.97												
JPMorgan MBS Bond Index	0.88	0.88											
LB Aggregate Bond Index	0.93	0.96	0.91										
JPMorgan JULI High-Grade Index	0.73	0.77	0.75	0.91									
JPMorgan US HY Index	**-0.18**	**-0.17**	**-0.05**	**0.06**	**0.38**								
S&P 500	-0.40	-0.36	-0.23	-0.17	0.13	**0.72**							
Wilshire 5000	-0.41	-0.37	-0.24	-0.18	0.12	**0.73**	1.00						
Russell 2000	-0.47	-0.44	-0.34	-0.28	-0.01	**0.64**	0.86	0.90					
JPMorgan EMBI- Global Composite	0.29	0.32	0.45	0.51	0.69	**0.65**	0.39	0.38	0.21				
Dow Jones World EM Stock Index	-0.15	-0.16	0.00	0.04	0.31	**0.71**	0.68	0.67	0.49	0.64			
Gold	0.60	0.59	0.46	0.58	0.57	**0.14**	-0.15	-0.17	-0.27	0.48	0.24		
US Inflation	-0.37	-0.39	-0.31	-0.33	-0.28	**0.19**	0.26	0.25	0.21	-0.03	0.11	-0.20	
Leveraged loans	**-0.35**	**-0.37**	**-0.28**	**-0.19**	**0.11**	**0.83**	**0.62**	**0.64**	**0.60**	**0.35**	**0.52**	**-0.13**	**0.15**

Source: J.P. Morgan.

Ten-year correlation ended December 31, 2019

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPMorgan JULI High-Grade Index	JPMorgan US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM EMBI Global Composite	DJ World EM Stock Index	Gold	US Inflation
10-year Treasury	0.92												
JPMorgan MBS Bond Index	0.84	0.81											
LB Aggregate Bond Index	0.85	0.87	0.85										
JPMorgan JULI High-Grade Index	0.69	0.67	0.70	0.86									
JPMorgan US HY Index	**-0.05**	**-0.18**	**0.05**	**0.14**	**0.48**								
S&P 500	-0.37	-0.47	-0.22	-0.20	0.10	**0.73**							
Wilshire 5000	-0.37	-0.47	-0.22	-0.18	0.11	**0.74**	0.99						
Russell 2000	-0.39	-0.50	-0.27	-0.27	0.01	**0.67**	0.89	0.92					
JPMorgan EMBI- Global Composite	0.33	0.24	0.43	0.50	0.69	**0.67**	0.42	0.42	0.28				
Dow Jones World EM Stock Index	-0.15	-0.29	-0.03	0.00	0.31	**0.75**	0.74	0.74	0.64	0.66			
Gold	0.40	0.33	0.32	0.36	0.40	**0.17**	0.02	0.03	0.02	0.37	0.28		
US Inflation	-0.21	-0.28	-0.18	-0.24	-0.19	**0.10**	0.15	0.14	0.11	0.00	0.11	-0.01	
Leveraged loans	**-0.26**	**-0.39**	**-0.18**	**-0.10**	**0.21**	**0.82**	**0.65**	**0.66**	**0.61**	**0.36**	**0.58**	**-0.06**	**0.12**

Source: J.P. Morgan.

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Risk and return of various assets

Fifteen-year correlation ended December 31, 2018

	5-year Treasury	10-year Treasury	JPMorgan MBS Bond Index	LB Aggregate Bond Index	JPMorgan JULI High-Grade Index	JPMorgan US HY Index	S&P 500	Wilshire 5000	Russell 2000	JPM EMBI Global Composite	DJ World EM Stock Index	Gold	US Inflation
10-year Treasury	0.92												
JPMorgan MBS Bond Index	0.82	0.82											
LB Aggregate Bond Index	0.78	0.85	0.85										
JPMorgan JULI High-Grade Index	0.49	0.56	0.61	0.84									
JPMorgan US HY Index	**-0.25**	**-0.24**	**0.00**	**0.19**	**0.52**								
S&P 500	-0.33	-0.32	-0.13	-0.01	0.26	**0.72**							
Wilshire 5000	-0.34	-0.33	-0.13	0.00	0.26	**0.72**	0.99						
Russell 2000	-0.37	-0.37	-0.20	-0.09	0.18	**0.68**	0.90	0.93					
JPMorgan EMBI- Global Composite	0.18	0.24	0.43	0.58	0.73	**0.73**	0.54	0.54	0.45				
Dow Jones World EM Stock Index	-0.22	-0.23	-0.02	0.11	0.39	**0.74**	0.77	0.77	0.69	0.70			
Gold	0.33	0.29	0.37	0.36	0.33	**0.17**	0.04	0.05	0.02	0.39	0.31		
US Inflation	-0.29	-0.34	-0.28	-0.27	-0.24	**0.19**	0.10	0.10	0.09	0.01	0.13	0.03	
Leveraged loans	**-0.44**	**-0.42**	**-0.17**	**-0.03**	**0.27**	**0.88**	**0.59**	**0.59**	**0.55**	**0.51**	**0.59**	**0.02**	**0.34**

Source: J.P. Morgan.

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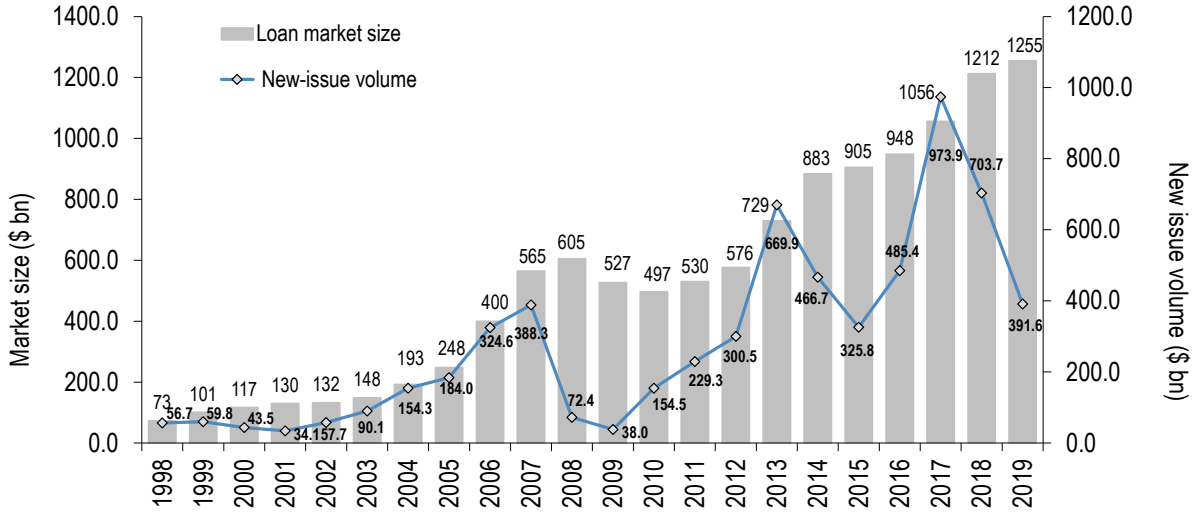
Leveraged Loan Market Growth

Global US dollar-denominated high-yield market growth



Source: J.P. Morgan.

Sources of supply and demand in the high-yield market

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	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross new issuance	154.5	229.3	300.5	669.9	466.9	325.8	485.4	973.9	703.7	391.6
Paydowns	-142.5	-201.8	-199.6	-259.5	-188.2	-175.0	-260.9	-344.8	-241.2	-255.0
Repricings	0.0	-0.3	-37.3	-241.7	-90.5	-63.5	-137.4	-440.3	-253.6	-60.5
Net new issuance	**12.0**	**27.2**	**63.5**	**168.8**	**188.2**	**87.3**	**87.1**	**188.9**	**208.8**	**76.1**
Retail inflows	17.9	13.9	12.2	63.0	-23.8	-21.7	9.2	13.1	-4.7	-38.3
CLO issuance	3.8	13.6	55.7	87.1	124.1	99.5	73.3	117.1	130.6	118.8
Total Demand	**21.7**	**27.5**	**67.9**	**150.1**	**100.3**	**77.8**	**82.5**	**130.2**	**125.9**	**80.5**
Supply surplus or shortfall	**-9.7**	**-0.3**	**-4.4**	**18.8**	**87.9**	**9.5**	**4.7**	**58.7**	**82.9**	**-5.4**

Note: Paydowns include amortizations, unscheduled paydowns, and bond-for-loan issuance. And CLO issuance excludes refi/reset deals.
Sources: JPMorgan; S&P LCD; Bloomberg; Lipper FMI.

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