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Global

Global Structured Credit Strategy

Volcker Clouds, Opal Highpoints, and Impact of Consolidation

- **Volcker Clouds** — The final version of the Volcker Rule earlier this week still leaves plenty of implementation uncertainty for CLO participants. Our early thoughts are that this version should be good for loans, but less so for CLO creation and liquidity.
- **Highpoints from Opal CLO Conference** — Expansion of the US credit cycle, volatility in loan prices, desirability of cov-lite buckets, and regulations figured in many discussions but the overwhelming concern was the CLO triple-A spread. Issuance was expected to at or below 2013 volumes and only a modest 15-20bp tightening in triple-A spreads by year-end was anticipated.
- **Manager Skills Needed in CLO Ramp-Up** — Global CLO demand is fighting high triple-A costs and US and Euro loan supply is constrained by net issuance. Though size is not critical for outperformance, larger managers may get better loan access.
- **Consolidation Proves Value of Scale But Mid-Sized Managers Did Best** — There is a higher number of acquisitive US managers with the highest equity (>6%) quarterly cashflows, but those with 4 – 7 deals did better than their larger peers.
- **New Managers Have Often Improved Portfolio Performance** — A study of the performance of deals 'before' and 'after' new management shows that the worst deals have improved, but will likely dilute the track record of the new owners.
- **Be Mindful of Consolidation in Equity Rankings** — Including the impact of consolidation on our regular equity studies highlights both the positive and negative impact that new mandates can have on the acquirer's unconsolidated performance.

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Volcker Clouds – Better for Loans than CLOs

A Long Wait with a Quick End

Though investors and dealers will be poring over the details for the next couple of months, the final version that emerged on Tuesday has at least removed three years of uncertainty over what market activity would be permissible for banks. Our initial thoughts (and we stress they are 'very' initial because there is considerable uncertainty around the language and its final implementation) are that this version should be good for loans. The prospect for loans is actually even better than initially thought since the rule may drive CLOs to move away from other assets into loans. Investor activity in a large part of the outstanding CLO universe may however suffer.

The main points of the Volcker rule as it pertains to loan and CLO activity are

- The rule prohibits banking entities to have an "ownership" in hedge funds and private equity funds, referred to as "covered fund", a definition that would capture CLOs. The rule excludes "loan securitization" from the "covered fund" definition. The definition of "ownership" appears to point to equity tranches, though any tranche with the right to select or remove managers may be included. The prohibition will apply to activities outside the US unless the bank is not controlled by an entity that is organized under US laws.

- An exempt loan securitization is one where loans are the only underlying assets. Securitizations consisting of structured assets, bonds, credit default swaps and other assets will not be exempt. Short-term cash equivalents, interest-rate and foreign-exchange derivatives are only allowed as hedges for the securitization. The agencies explicitly disallowed broadening the definition to allow non-loan assets.

- The rule also allows banking entities to engage in underwriting and market-making activity of loan securitizations. The rule does, however, appear to prohibit entering into transactions with "covered funds".

- The rule is effective on April 1, 2014 but conformance has been extended by until July 21, 2015. Moreover, no grandfathering is allowed for non-exempt deals.

CLO Creation and Liquidity Possibly Impaired

While the exclusion of loan securitization is something to cheer about, the narrow definition can potentially disrupt the CLO market. Most CLO 1.0s contain 5-10% of high-yield bonds or structured assets. Post-crisis CLO's (or CLO 2.0), on the other hand, do not contain any structured assets, but about 58% of US CLO2.0's (and nearly all European CLO 2.0s) have bonds in their collateral. These CLO's, therefore, would not be exempt from the Volcker rule definition. Providing credit to, or transacting in, such non-exempt CLOs would become difficult, though an exemption for "market-making" may improve the situation.

Because of 'no grandfathering', banks with more than $50 billion of assets have until July 21, 2015 to divest from their non-exempt CLO holdings. Given our estimate of the CLO universe of $300bn with a significant presence of US banks, that could create tremendous selling pressure.

We can potentially see a wave of deal modifications (to disallow non-loan assets from CLO collateral) to bring existing CLO's into compliance. This will not be seamless, since equity holders will likely prefer higher-carry bonds. The loan-only CLO demand, in theory, will be good for loans though investors should also recall the supply challenges that the new Leveraged Lending Guidance brings to dealers.

Opal – Some Key Points

At the well-attended Annual CLO & Leveraged Loan Conference, issuers and investors expressed a range of views on the direction of the loan and CLO market for 2014. Europe, the desirability of cov-lite loans, the expansion of the US credit cycle, and regulations figured in many of the discussions but the overwhelming concern appeared to be the level of the 'CLO arbitrage' and the triple-A spread. Here are some of the take-aways, in no particular order.

- **Lower Volumes, Tighter Spreads in 2014.** Participants did not expect issuance to be substantially over 2013 volumes of $75bn, a high percentage felt $65bn was realistic. Triple-A spreads would tighten to 130-135bps by year-end, but buyers are aware of the volatility in triple-A spreads over the last three years.

- **Triple-A Buyer Base. Fixed Rate AAAs.** The lack of depth of the triple-A buyer base was a consistent theme, with little expectation of a major expansion soon. The appeal of fixed-rate triple-As was mentioned, but creating fixed liabilities would require large bond buckets (see previous section on Volcker rule).

- **CLO Mezz versus Equity.** Discounted mezz bonds, despite their high market-beta, appealed to hedge funds but real-money are the biggest mezz buyers today. CLO Equity still had appeal for most investors (the product's liquidity relative to loans was mentioned) and could benefit from loan price volatility.

- **Turn in US Credit Cycle.** There were quite a few sounds made about the turn in the US credit cycle. Corporates were missing targets, credit selection was critical, and high loan prices combined with less call protection made portfolio selection difficult. Managers had to stretch further to achieve target equity yields.

- **Higher Loan Volatility.** The onset of a QE-taper and possible fund outflows would make loans more volatile. Shorter-dated "CLO 1.0" loans would likely become illiquid as more legacy CLOs became static.

- **Cov-lite Loans.** Many CLO managers felt the strongest pressure against cov-lite came from buyers of triple-As, which have negligible credit risk. The constraints reduced flexibility, and many mezz buyers preferred fewer restrictions, A few loan specialists felt that covenants were valuable because of a seat in restructuring discussions, which had recently lead to higher returns for distressed lenders.

- **Portfolio and Manager Differences.** Some managers of credit funds said that mezz buyers did not sufficiently distinguish portfolio quality and manager behavior (premature sales, as an example) differences among CLOs

- **CLO 1.0s.** There was significant difference in opinion on CLO calls, despite a consensus of relatively high loan prepayments. The low liability costs of CLO deals would keep them outstanding. Older deals benefited from deleveraging but were vulnerable to new rating stresses as portfolios became less diversified.

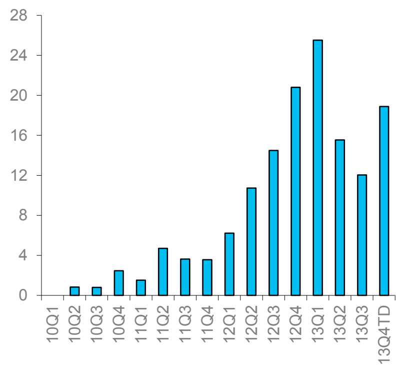
- **Regulations.** In spite of the recent Volcker Rule (see earlier section) and constraints imposed by the Leveraged Lending Guidance, panelists focused on FATCA and Risk Retention. The possibility of litigation to change the direction of the Retention Rule (which is approaching the European version) was mentioned.

- **Europe.** The global nature of the CLO market, and growing confidence in the European recovery story, was made clear by a couple of panel discussions on European CLOs. The higher quality of Euro CLO 2.0 portfolios versus those of legacy deals is a counterpoint to the poor performance of a few Euro CLO 1.0s.

Loan and CLO Primary Volumes

CLO Demand Boosts Q4 Issuance

Figure 1. US CLO Issuance, $bn

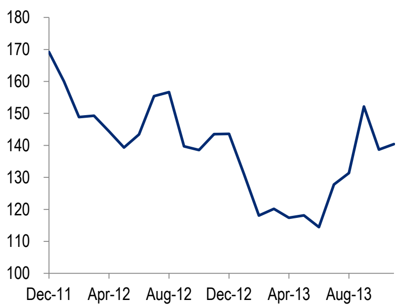


Source: Citi Research

Dealers have launched a raft of new CLOs, most likely driven by the need to clean up balance-sheets over the year-end and make room for new warehouse lines,. Year-to-date issuance of US broadly-syndicated loan CLOs now stands at $72bn, which has exceeded our beginning-of-2013 forecast of $65bn. Despite a slow third-quarter, the last two months' issuance has already exceeded each of the last two quarters (Figure 1). The issuance comes amidst a healthy demand for CLO mezz and equity tranches, but a relatively shallow bid for the triple-A part of the capital stack. Though many established managers and dealers have been able to price their bonds in the low 140bp area, others such as MJX and Saranas managed deals have had to pay substantially more. Venture XV CLO, managed by MJX, paid L+158bp on its triple-A bonds, while a deal managed by Saranas (with Canaras as a sub-advisor) paid L+148bp for a supersenior triple-A tranche with approximately 10 points more enhancement than a traditional CLO 2.0 triple-A bond.

Another Q1 Triple-A Squeeze Probable

Figure 2. New IssueTriple-A CLO 2.0 spreads, bp

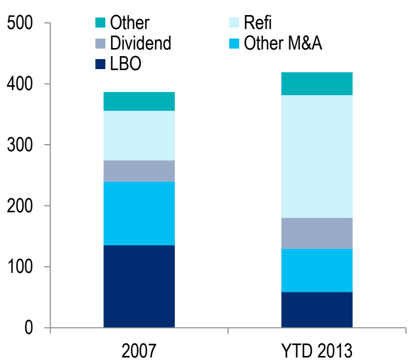


Source: Citi Research

As we have pointed out several times previously, triple-As are the cheapest part of the capital stack on a risk-adjusted basis but we may see 15-20bp tightening next quarter. New issue triple-A spreads do not move smoothly. In the past we had periods where we had sharp tightening followed by a similar spate of widening. As it turns out, 2012 was no different (Figure 2). First, many bank treasurers get new allocation at the beginning of the year which they then spend over the next few months. Dealers try to opportunistically bring deals which leads to some over-supply. The situation last year was exacerbated by the FDIC charge (Global Structured Credit Strategy - CLO Call Candidates; FDIC versus Basel?) with most banks keen to make their CLO purchases prior to the March-end deadline. The deadline was quickly followed by Fed statements about the timing of a possible QE-taper. The negative sentiment combined with senior buyers having likely exhausted their annual budgets brought triple-A spreads to just shy of 150bps. Our tightening estimate is based on the evidence that a few deals achieved a spread of 110bp in Q1 this year. With the addition of an approximately 20bp FDIC charge for many US banks, a 130bp spread is possible (so 15-20bp tight to current levels). However, if a steepening in the yield curve leads to higher five-year rates, we could see some move away from floating-rate notes into high quality bonds and Treasuries.

Less Pressure on Loans Also Probable

Figure 3. Leveraged Loan Issuance Volume by Purpose, $bn



Source: LCD, Citi Research

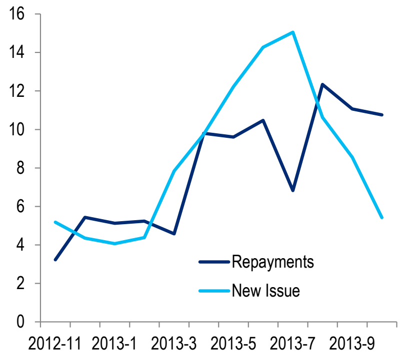
CLO managers have been challenged this year at finding (and then keeping) attractively priced loans. Though volumes this year have been reasonably healthy and even above that of 2007, the key difference is the loan purpose (Figure 3). Just under half of the loans issued this year were used to refinance older debt. In contrast, issuance during 2007 was dominated by LBOs (not all good as we recall) and corporate M&A activity, both sources of net new issuance. Loan refinancings, most of which happened in Q1 of this year, were a result of borrowers exploiting the difference between tight primary and wide secondary markets. New issue spreads now are at a similar level to beginning-of-year levels (though tight to secondary levels at that time). The downside is the wider triple-A spread now versus during Q1. The silver lining is that our high yield strategists believe that the scope of loan spread tightening is substantially reduced (Speculative Grade Credit Weekly - Slicing and Repricing). CLO Equity buyers should be happy at the scenario of less pressure on loan spreads, especially if combined with tighter triple-A pricing.

Benefits of Manager Consolidation

Finding Loans a Challenge in Europe too

Euro CLO managers will also be challenged by equity investors to find loans at attractive spreads. There was a healthy supply of new-issue collateral in the middle of the year (Figure 4) but supply has since dwindled. Though we do not see a similar volume of calls as we recently did for legacy US CLOs, we do believe managers will try to source collateral from existing managed accounts and total return swaps between dealers and investors. We believe deals that were created at the end (2007-2008) of the Euro CLO 1.0 cycle with relatively higher liability costs will be the most likely call candidates once they start to amortize next year. There will be sporadic portfolio sales as highlighted by the LCD-reported sales of two Carlyle CLO portfolios. Finally, Euro CLO 2.0s offer some flexibility in collateral with managers being able to invest in secured bonds as an alternative to senior loans.

Figure 4. European Loan (ELLI) Repayments and New Issue Rolling 3M Volumes, €bn

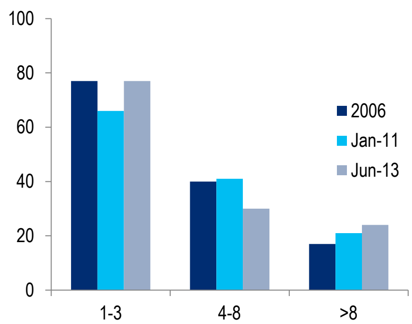


Source: LCD

Big may be better to get more loans

The challenge to find good loans that CLO managers face may partially be helped by size. Large managers should be able to get allocation, says the theory. The CLO manager landscape has changed significantly in the last two years with more managers having a large number of deals compared to the period before the financial crisis (Figure 5). The pace of consolidation has slowed down, though one outcome of the proposed US CLO Risk Retention rules (CLO Risk Retention – Too Big To Fail? - A Tale Of Unintended Consequences) may lead to more consolidation. Certainly some of the biggest CLO managers have achieved that size today through acquisition rather than the growth of the CLO 2.0 market. An example is CIFC which most recently acquired deals from GE Capital and previously from Cypress Tree and Deerfield. Other 2012 US deals included Apollo's acquisition of Stone Tower and Gulf Stream, CVC's acquisition of Apidos and THL Credit Advisors' purchase of three CLO mandates from McDonnell. Part of 3i's expansion of its debt management business was its acquisition of five deals from Fraser Sullivan. There have also been some new first time managers, with the result that the biggest drop has been in the number of mid-sized managers (4-8 deals) rather than in smaller (1-3 deals) managers.

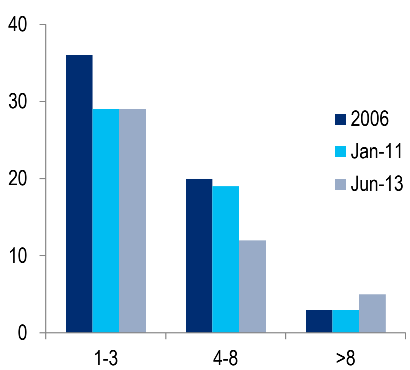
Figure 5. Number of managers (vertical axis) by US CLOs managed (horizontal axis)



Source: Moody's

There has been some consolidation activity in Europe too, though at a smaller scale than the US (Figure 6). The other part of 3i's expansion of its debt management business was its acquisition of three European deals from Invesco, in addition to deals that it had acquired which were previously managed by Mizuho. The most recent European acquisition was KKR's announcement of its purchase of Avoca.

Figure 6. Number of managers (vertical axis) by Euro CLOs managed (horizontal axis)



Source: Moody's

Risk is Collateral Overlap

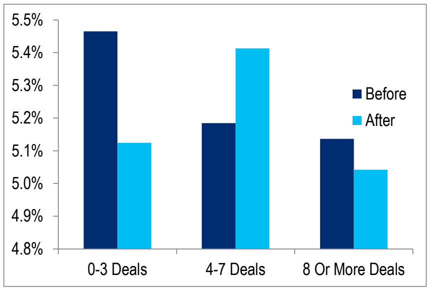
The overall result of consolidation will be a less diversified, and as a result, smaller CLO investment universe. Many investors have limits on individual CLO managers, Moreover, as these investors know, there is considerable overlap between deals managed by the same manager than across the wider collateral universe. In the latest Moody's study[1] on the subject concluded that the same investment process used by a manager across all their deals resulted in an average collateral overlap of 52% among the deals. Using the same metric, the average overlap across all CLOs is only about 22% (slightly higher for CLO 2.0s which is 26%). Moreover, bigger managers have not done better as we see in the next section.

[1] Obligor Overlap in CLOs Issued After 2009 Is Similar to That of Pre-Crisis CLOs, Moody's Investors Service, CLOInterest, Moody's Investors Service, 4 December 2012

Consolidation Not Always Good for Equity

We believe that not only do the largest managers as a group not provide the highest equity returns, but that consolidation often clouds the analysis of historical performance. Bigger managers find it harder to outperform because they generally have to buy the market. This is all the more important in the case of CLO equity where manager performance matters the most. We show the distribution of historical average equity cash flows by manager size, expressed as CLOs under management in Figure 7. The data is based on our previous equity study (Global Structured Credit Strategy - CLOs – Equity and 1.0 Mezz For Higher Yields). Some care must be taken in interpreting the numbers. Many large managers have built up their platforms by acquiring weaker partners with poorly performing deals, and as a result the average may be reduced (especially in the 'After' case in the figure). There may also be a vintage effect with the smaller managers in case the deals were done during 2006 and 2007 which were vintages that had high cumulative equity cash flows because of their low liability cost. It is striking though, that larger managers did not generate the highest cashflows even without the including the impact of consolidation. Moreover, many of the best smaller managers became parts of bigger teams. This is apparent by comparing the best performing group pre- and post-consolidation.

Figure 7. Average quarterly US CLO equity cashflow, vertical axis, by manager size (CLOs under management) before and after excluding the impact of consolidation

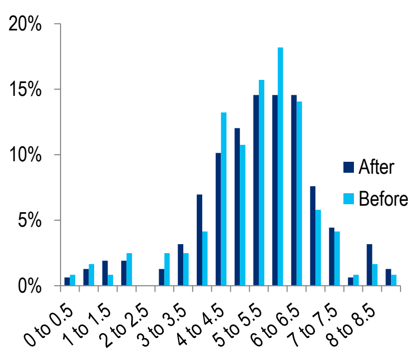


Source: Intex, Citi Research

Evidence of Scale Up To a Point

Though mid-sized managed managers have generated the highest cashflows, consolidation has its benefits. We feel that the best individual managers have found larger institutions to support their skills, while the least effective managers have been left on their own. We feel the process has been beneficial overall since we believe economies in scale has led to a higher number of bigger managers among those with the highest historical payments. We see this from the US market (Figure 8) where the level of consolidation has been stronger than in Europe. The graph shows a higher share of the higher performers (greater than 6% quarterly returns) in the post-consolidation 'After' world. Conversely there's a bigger share of the lower (less than 3% quarterly returns) universe in the light-blue 'pre-consolidation' world. The evidence is less clear in Europe (Figure 9) due to fewer deals.

Figure 8. US CLOs: Distribution of manager universe (vertical axis) by average quarterly cashflows (%, horizontal axis) before and after the impact of consolidation

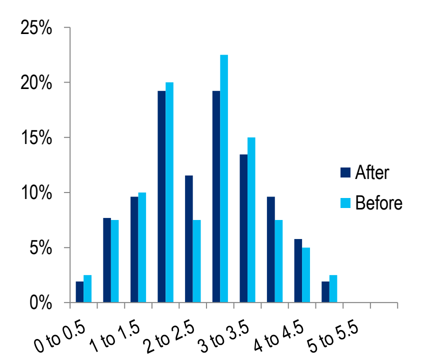


Source: Intex, Citi Research

Better Portfolio Post-Consolidation

Many of the legacy distressed portfolios have seen improvement under new management. Readers of our periodic CLO Monitor will recall the above-norm distressed state (measured by size of defaulted loan and triple-C buckets and size of interest diversion cushion) just after the crisis of portfolios then managed by Cypress Tree, GSC Partners, Katonah, and Avenue Capital. Figure 12 shows how the portfolios run by GSC and Katonah were de-risked more than the universe of all deals, though in the case of GSC deals there is a clear switch back to a riskier higher-WARF, higher spread portfolio (Figure 12 and Figure 13). In other cases, the de-risking has led to more conservative portfolios with below-norm spreads (in the cases, for example, of Katonah and Cypress Tree, see Figure 13).

Figure 9. Euro CLOs: Distribution of manager universe (vertical axis) by average quarterly cashflows (%, horizontal axis) before and after the impact of consolidation



Source: Intex, Citi Research

Figure 10. Performance of Consolidated Managers and Their Subsidiaries (US)

Current Manager	Original Manager	Avg Return
Apollo	All	5.2%
	Apollo	8.4%
	Stone Tower	5.8%
	Gulf Stream	4.2%
Ares	All	4.5%
	Ares	4.0%
	Nomura	4.9%
	Navigare Partners	6.2%
Babson	All	6.3%
	Babson	6.4%
	Jefferies	6.1%
	Brightwater	6.6%
Carlyle	All	4.6%
	Carlyle	5.3%
	The Foothill Group	6.3%
	Mountain Capital	4.4%
	Stanfield Capital	4.0%
CIFC - Deerfield	All	5.2%
	Deerfield Capital	5.1%
	CIFC	6.6%
	Columbus Nova	5.8%
	CypressTree	2.8%
	Primus	5.0%
CVC	All	5.9%
	ACA Management	6.2%
	Apidos Capital	7.2%
	Churchill Pacific	4.0%
GSO	All	4.3%
	Callidus Capital	4.8%
	GSO	5.2%
	FriedbergMilstein	1.6%
	Royal Bank of Canada	3.2%
	Katonah Capital	2.9%

Source: Citi Research

Figure 11. Performance of Consolidated Managers and Their Subsidiaries (Europe)

Current Manager	Original Manager	Avg Return
3i	All	1.8%
	Invesco	0.7%
	Mizuho	2.2%
	MSIM	2.9%
Blackstone	All	3.1%
	AIB	3.2%
	Harbourmaster Capital	2.9%
	Blackstone	3.9%
Pramerica	All	2.9%
	Pramerica	3.4%
	GSC Partners	1.5%
	Aladdin Capital	2.3%

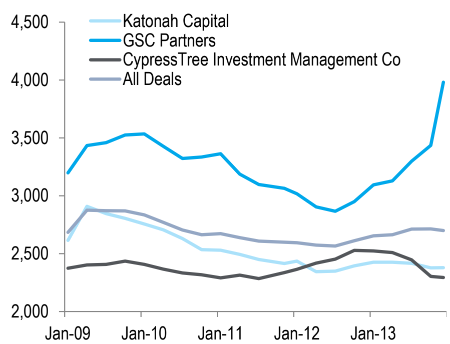
Source: Citi Research

Ranking Changes Highlight 'Alpha' Effect

Readers of our periodic equity return studies follow the dispersion in equity cash returns among managers that we track. Just as we showed above that consolidation has shifted the highest equity cash generators from the smaller to the more mid-sized managers (with significant exceptions, of course), it has also made it important to distinguish the performance of legacy deals within a manager platform versus those of newly acquired mandates. Investors wishing to see more detailed data behind the summary charts should ask their Citi salesperson, but the decision to purchase poorly-performing deals (presumably at a low cost) versus a deal with high historic cashflows from a competing manager will skew the acquirer's averages.

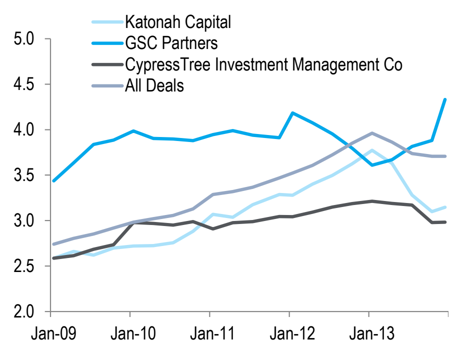
In Figure 10 and Figure 11 we show the average quarterly equity cashflows for a few managers when all the deals that the manager has acquired are considered together versus the quarterly cashflows for the subsets of legacy mandates that the manager acquired. These examples show that different subsets can have different performance and that the new managers' averages can be skewed by any significant outliers. These examples serve to highlight the importance of manager due diligence for equity buyers and for investors not to completely rely on aggregated statistics from our studies, even though they are useful for investors as a starting point.

Figure 12. WARF of Selected Acquired Managers



Source: Citi Research

Figure 13. WAS of Selected Acquired Managers



Source: Citi Research

Appendix

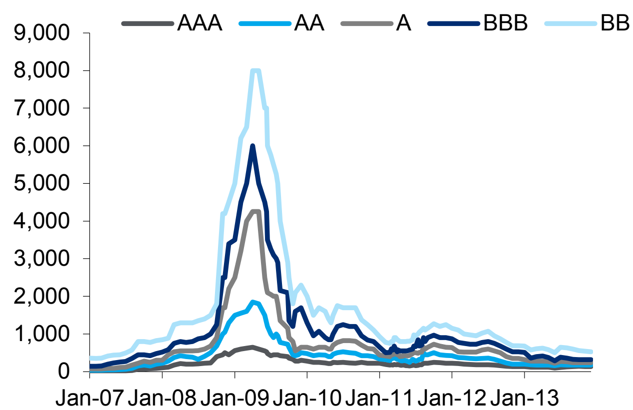
Cash Flow CDO Market

Figure 14. Secondary Cash Flow CDO Spreads/Prices

Collateral Type	AAA	AA	A	BBB	BB
US HY CLO 1.0 (Spreads) – 1-*Dec-13*	130	170	240	320	530
US HY CLO 1.0 (Prices) – 1-*Dec-13*	Mid 90s – High 90s	Low 90s – High 90s	Low 90s – High 90s	Low 90s – High 90s	High 80s – Mid 90s
US HY CLO 2.0 (Spreads) – 1-*Dec-13*	148	200	300	405	605
US HY CLO 2.0 (Prices) – 1-*Dec-13*	High 90s - Par	High 90s – Par	Mid 90s – High 90s	Low 90s – Mid 90s	High 80s – Mid 90s
Euro HY CLO (Spreads) – 1-*Dec-13*	135	195	300	510	750
Euro HY CLO (Prices) – 1-*Dec-13*	Mid 90s – High 90s	Low 90s – High 90s	High 80s – Mid 90s	High 70s – Mid 80s	High 70s – Mid 80s

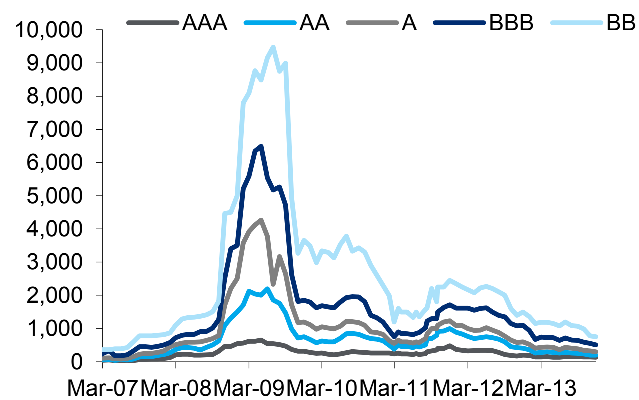
Source: Citi Research

Figure 15. US CLO Tranche Spreads



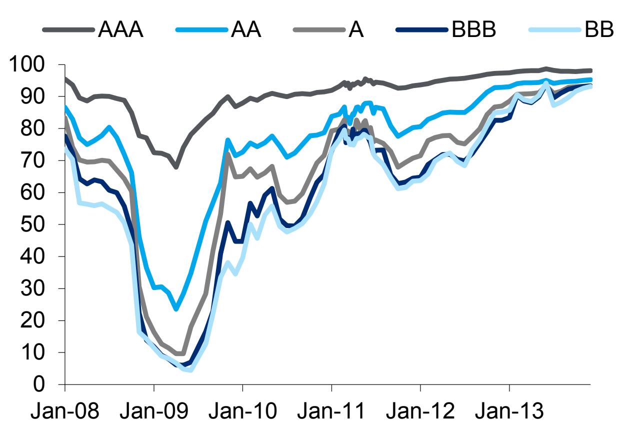
Source: Citi Research

Figure 16. European CLO Tranche Spreads



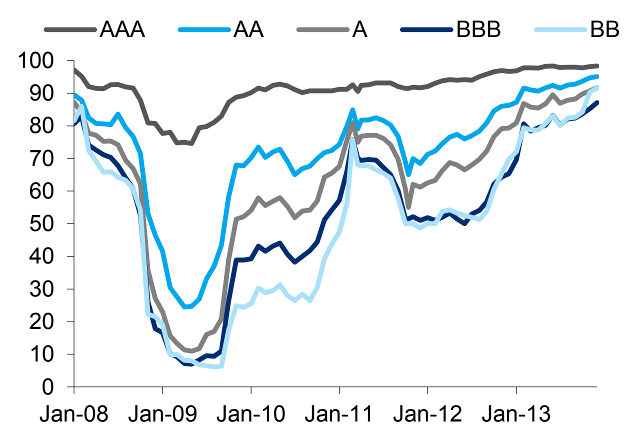
Source: Citi Research

Figure 17. US CLO Tranche Prices



Source: Citi Research

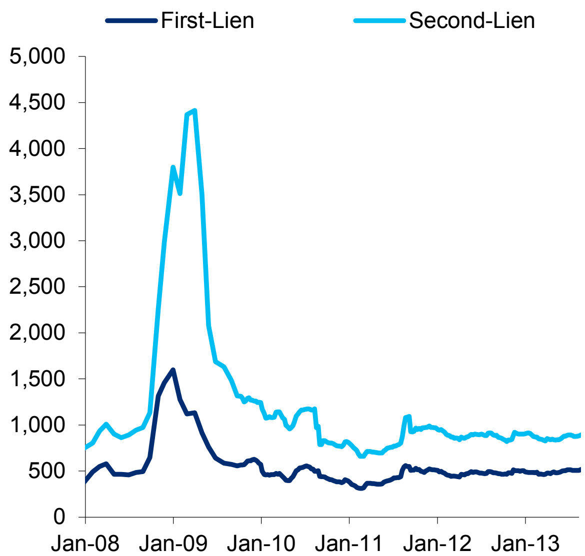
Figure 18. European CLO Tranche Prices



Source: Citi Research

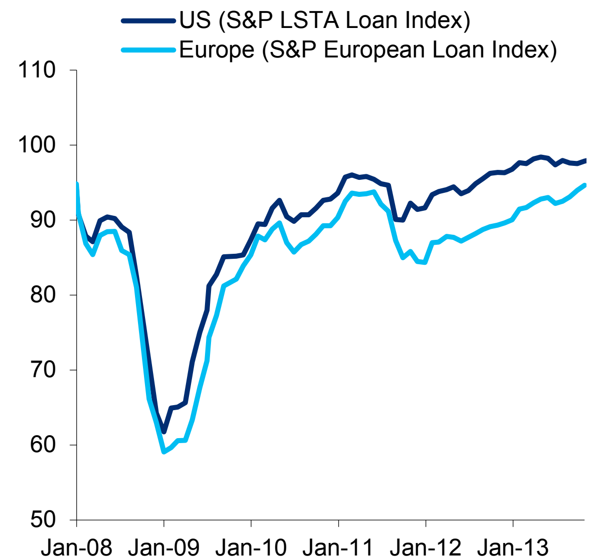
CLO Collateral

Figure 19. Avg First and Second-Lien Secondary Spreads to Maturity



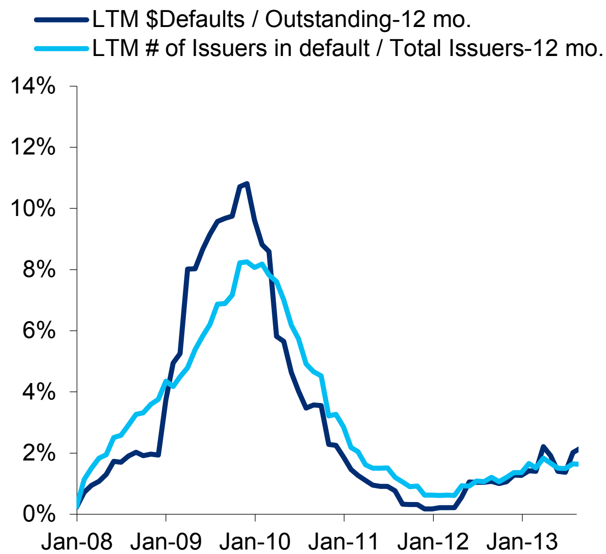
Source: S&P

Figure 20. Weighted Average Bid



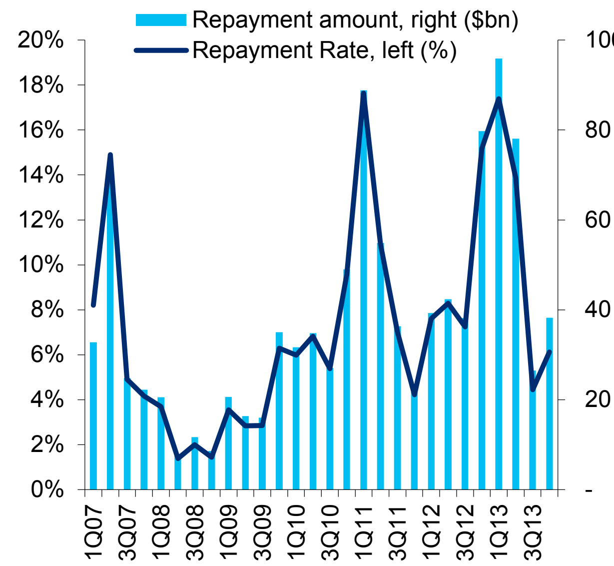
Source: S&P

Figure 21. US Lagging 12mo. Default Rate by Principal and # of Issuers



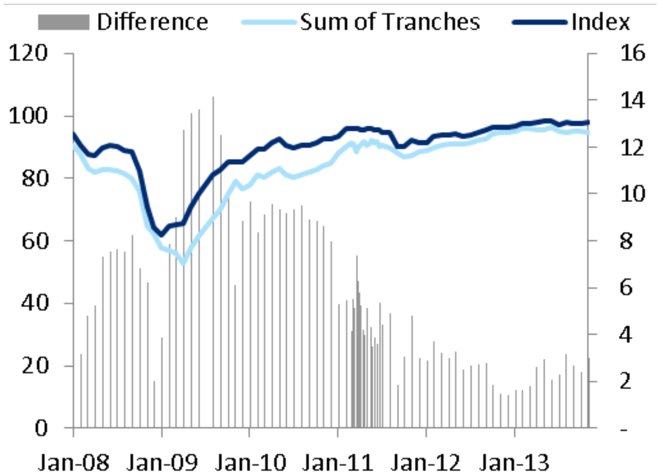
Source: S&P

Figure 22. US Quarterly Repayment Rate and Repayment Amount



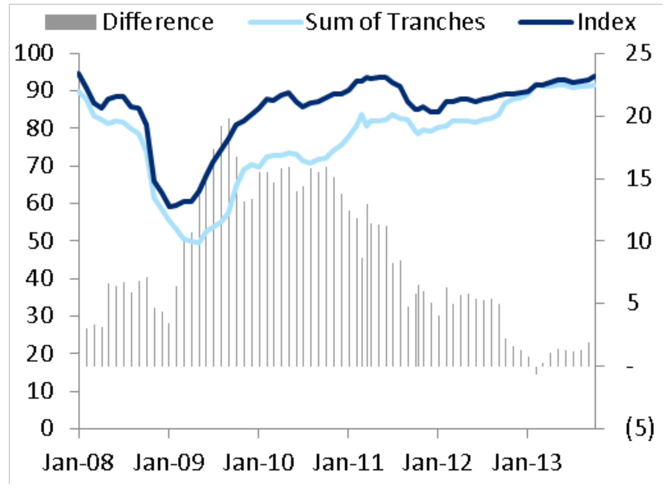
Source: S&P

Figure 23. Collateral/Tranche Arbitrage (US Deals)



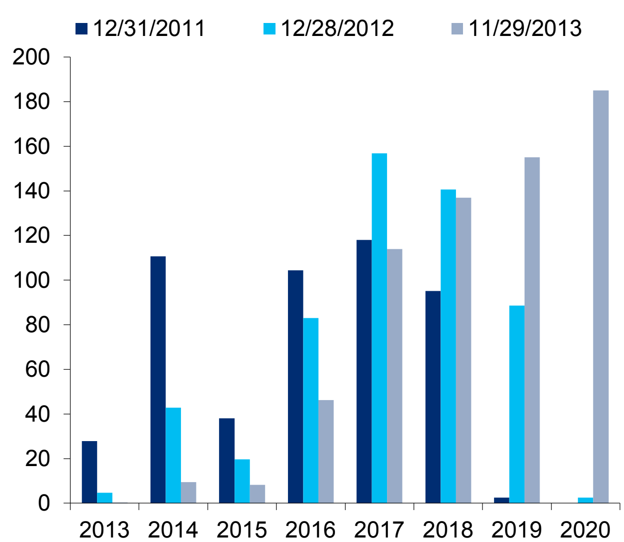
Source: Citi Research

Figure 24. Collateral/Tranche Arbitrage (EUR Deals)



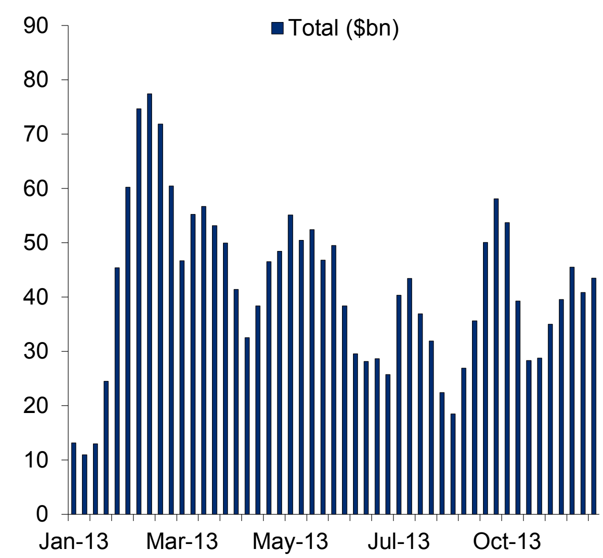
Source: Citi Research

Figure 25. US Loan Distribution by Year of Maturity



Source: S&P

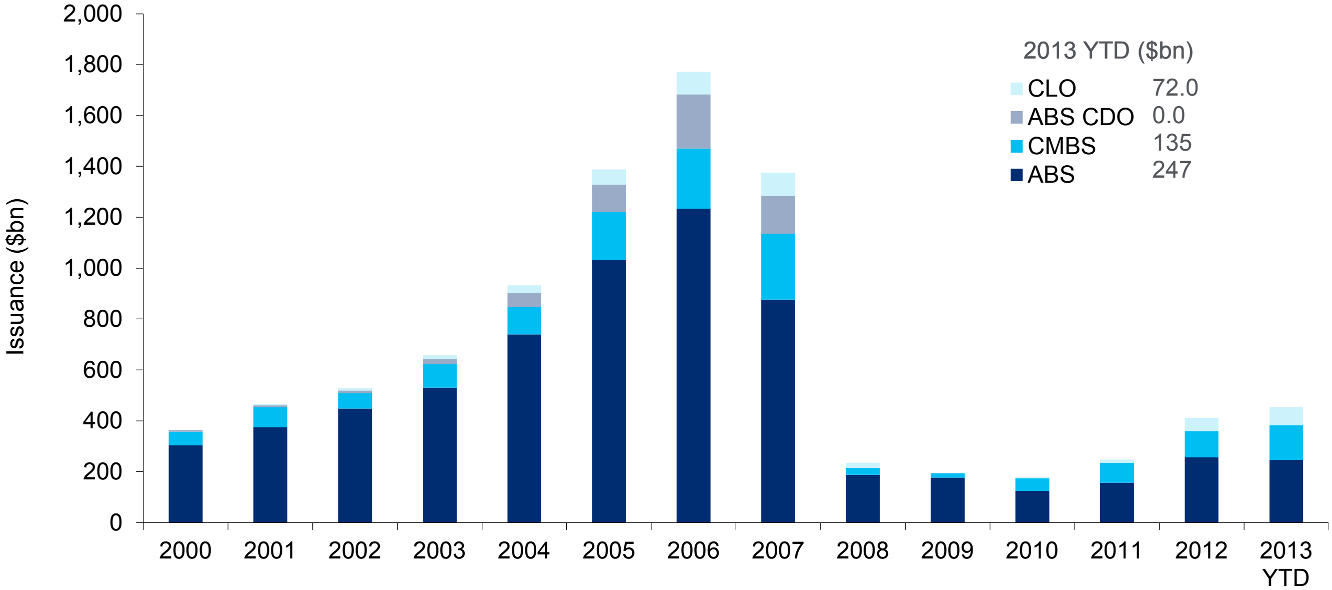
Figure 26. US Institutional Loans Launched to Market, $bn (Rolling 30-Days)



Source: S&P

Securitized Products Issuance

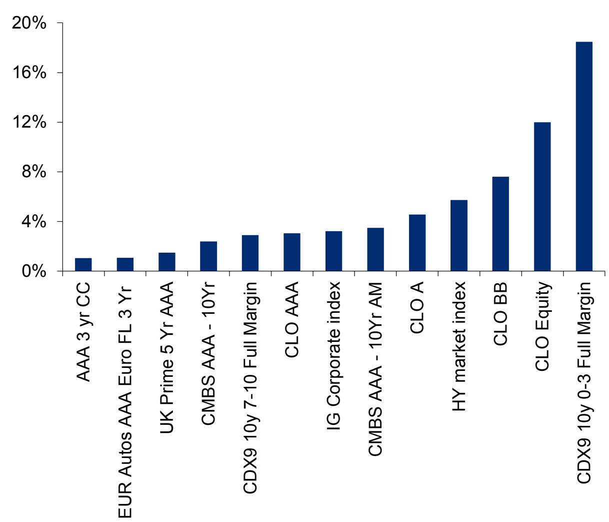
Figure 27. Year-to-Date CDO Issuance and Securitization Market Historical Issuance ($bn)



Source: Bloomberg, Citi Research

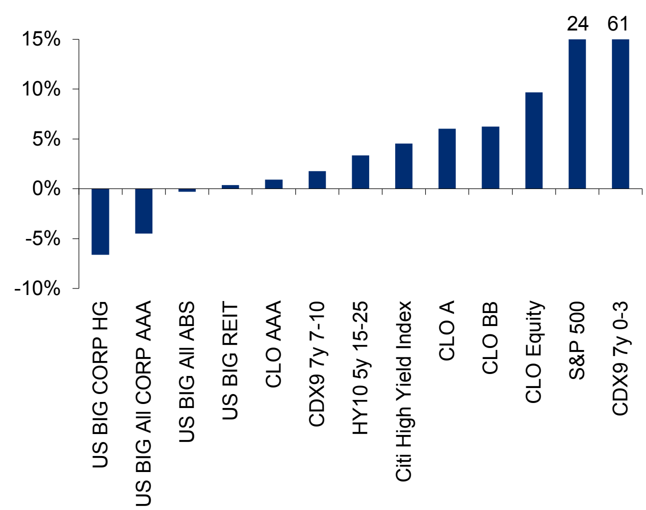
Securitized and Non-securitized Products Returns

Figure 28. Simple Yield



Source: Citi Research

Figure 29. Total Returns, 2013 YTD



Source: Citi Research

Appendix A-1

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