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May 13, 2008

Credit Strategy

Global

Special Report

A Writedown Writeup

This is a report about the credit assets on the balance sheets of broker/dealers in the US and Europe, and the investment implications for credit. We compare exposures between US and European banks, look at where we see these assets marked, and discuss how we see the writedown story progressing from here. Our key conclusions:

No Great Atlantic Divide: Our reading of marks by US and European broker/dealers points to a smaller differential than what we believe is the conventional wisdom, especially given that we are still not fully through the European earnings season.

Dispersion of Marks Is Falling: Equally important, the average mark is moving closer to a tradable price, and the dispersion of marks among the broker/dealer community has shrunk meaningfully. This is an important step towards better secondary market liquidity, and a true risk transfer, as asset prices become more similar between banks and potential buyers.

Shock Potential Is Falling, but Beware Gaps in the Hedges: Hedges deployed by banks may be the next, somewhat ironic source of pain, as we see the potential for basis risk and counterparty risk looming in many of these trades.

Out of the Frying Pan, into the Fire: Using different assumptions, we see the potential for a further $90-180 billion in writedowns by the banks in our universe, versus approximately $230 billion taken to date. In other words, we believe we are about two-thirds of the way through the asset writedown story. But as our equity analysts in the US and Europe have highlighted repeatedly, the looming concern is that of more traditional loss provisioning by commercial banks.

A Better Story in Credit than Equities: Rising provisions and further deleveraging will make the earnings environment challenging for years to come, although with tail risk also reduced, we be believe this will be a greater headwind to financial equities than to credit.

Credit Strategy

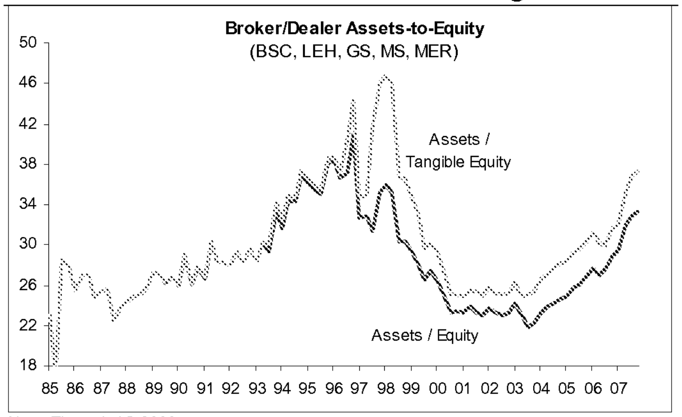
A Writedown Writeup

Global Credit Strategy Team

Among all the spectres that have haunted markets over the last nine months, the most feared may be that of toxic, illiquid, hard-to-value assets lurking on bank balance sheets. The fallout from ABS CDOs, which have generated over $100 billion of reported losses on $200 billion of 'AAA-rated' original exposure, has raised serious questions about a host of other assets previously deemed risk-remote, hedged, or highly rated. Never before has so much, been lost so quickly, by so few. With confidence in ratings and risk-control badly shaken, investors have been staring at the above-average leverage of banks and broker-dealers with exhausted trepidation as earnings releases roll along.

Exhibit 1

Multi-Year Rise in Broker-Dealer Leverage



Note: Through 1Q 2008
Source: Morgan Stanley Research

This is a report about the credit assets on the balance sheets of broker-dealers in the US and Europe, and the investment implications for credit: We compare exposures between US and European broker/dealers, look at where we see these assets marked, and discuss how we see the writedown story progressing from here. Our key conclusions:

No Great Atlantic Divide: Our reading of marks by US and European broker-dealers points to a smaller differential than what we believe is the conventional wisdom. European broker-dealers that appear to have the largest exposures are those with the largest investment banking operations, and they have reported marks that are generally in line with their American counterparts.

Dispersion of Marks Is Falling: Equally important, the average mark is moving closer to a tradable price, and the dispersion of marks among the broker-dealer community has shrunk meaningfully. This is an important step towards better secondary market liquidity, and a true risk transfer, as asset prices become more similar between banks and potential buyers.

Shock Potential Is Falling, but Beware Gaps in the Hedges: Bank credit assets will continue to be sensitive to movements in the broader market. But with the gap between mark and traded price notably smaller, tail risk has been reduced. Hedges deployed by banks may be the next, somewhat ironic source of pain, as we see the potential for basis risk and counterparty risk looming in many of these trades.

Out of the Frying Pan, into the Fire: Using various assumptions, we see the potential for a further $90-180 billion in writedowns by the banks in our universe, versus approximately $230 billion taken to date. In other words, we believe we are about two-thirds of the way through the asset writedown story. But as our equity analysts in the US and Europe have highlighted repeatedly, the looming concern is that of more traditional loss provisioning by commercial banks. Rising provisions and further deleveraging will make the earnings environment challenging for years to come, although with tail risk also reduced, we be believe this will be a greater headwind to financial equities than to credit.

Our Methodology, Briefly

Most dealers have not explicitly disclosed where positions are marked (priced) as a percentage of par, although it is recently becoming more common. As such, treat the calculations that will follow in this report as our best estimate given publicly disclosed information. Estimating marks is complicated by the fact that positions are not static in time, and dealer positions across assets classes have been in constant motion over the last nine months, for both voluntary and involuntary reasons. As such, applying total losses to original exposures will not give us an accurate sense of markdowns.

Instead, we adjust marks for balance changes that have occurred due to sales, inflows, or FX changes. While admittedly imperfect, we have found this approach to have much less tracking error than others we've considered, and this methodology has matched up reasonably well to marks that have later been explicitly disclosed (generally +/- 2%).

In addition, a note on hedges is in order. Reporting standards and details of disclosures vary a great deal. In a universe that spans the US and Europe, each financial institution reports exposures differently. Nowhere is this truer than in the treatment of hedges, which can drive vastly different pictures of exposure (gross vs. net). Wherever possible, we look at gross losses vs. gross exposures (rather than net vs. net). We believe this leaves our analysis less exposed to basis risk in hedges, a topic we will cover in more detail later in the report, as well has making our loss assumptions somewhat more conservative.

Our Banking Universe, Briefly

Our study includes 22 major banks and broker-dealers in the US and Europe (7 US, 15 European). While not complete, we do feel it provides comprehensive coverage of the broker-dealers with the largest exposures to assets which also face mark-to-market pressures. We have excluded insurers (although some of our banks do have insurance arms), as our focus is intended to be on broker-dealers, whose leveraged nature amplifies the effect of losses on the broader financial system. Reported exposures are through May 13, 2008.

Lay of the Lands: Marks & Losses in US and Europe

Our first task is to break down the various exposures of US and European broker-dealers across specific categories of stressed credit assets, and track the evolution of writedowns, balance changes, and remaining exposures over time. We convert all figures to US dollars for simplicity of reporting.

Once we have estimated current marks, we can model an estimate for future losses by making industry-wide assumptions for a price of each asset, and applying these to the exposures that remain. In order to be conservative, we use the *lower of* our generic mark, and the bank's specific mark, on the asset.

In our opinion, this exercise is well suited for a base/bear case analysis. In the table below, we show current weighted-average marks across various credit assets, and our assumptions for Base and Bear-case stress tests.

Exhibit 2

Current Asset Marks, and Scenario Assumptions

	Marks			
	Current Average	Base Case	Bear Case	Exposure Currently Remaining ($bn)
ABS CDO Super-Senior				
High Grade	56%	31%	25%	$50
Mezzanine	38%	27%	15%	$21
ABS CDO, Not Super-Senior	28%	8%	0%	$5
Subprime RMBS				
Whole Loans/High-Quality	71%	70%	60%	$42
AAA (if specified)	91%	85%	75%	$14
Non-AAA (if specified)	34%	15%	0%	$5
Alt-A				
Whole Loans/High-Quality	89%	80%	70%	$81
AAA (if specified)	88%	85%	75%	$75
Commercial Real Estate	96%	92%	85%	$259
Leveraged Finance	92%	90%	85%	$335
Monoline Exposures	66%	60%	25%	$40
Other ABS	96%	95%	85%	$136

Notes: "Other ABS" includes European RMBS, Credit Card ABS, and other ABS not related to real estate. Predominantly, it was reported as being rated "AAA". "Monoline Exposures" refers to the portion of hedges, which face monolines, that are 'in the money'.
Source: Morgan Stanley Research, Company Reports

Using these assumptions, we derive estimates of losses still to come among European and US broker-dealers in Exhibit 3. As noted earlier, even though we have done our best to capture all large institutions on both sides of the Atlantic, our list is not exhaustive. Scaling losses to market capitalization gives us a more balanced view of exposure, given that we're using a universe that contains more European institutions.

Exhibit 3

Stress-Testing Additional Asset Writedowns

Figures in $bn

			Additional Loss		Add. Loss/Mkt Cap	
Region	Mkt Cap	Losses to Date	Base Case	Bear Case	Base Case	Bear Case
US	$668	$98	$32	$69	4.8%	10.4%
Europe	$1,138	$137	$59	$117	5.2%	10.3%
Combined Total	$1,806	$235	$91	$187	5.1%	10.3%

Note: All figures contain reported exposures through May 13, 2008.
Source: Morgan Stanley Research, Company Reports

From the table above, we make several observations. First, numbers to date contradict the notion that European broker-dealers have not "taken the pain". They have currently taken writedowns in similar proportion, to size, as their US counterparts. Disclosures over the last two months have been game-changing and have materially reconciled the gap that existed at year-end between the two regions. More important for the transatlantic debate, our estimates for further write-downs relative to market capitalization also point to rough parity between US and European banks, under both base and bear cases. The large first-quarter markdowns, while painful, have defused a significant amount of risk that was previously present in the system.

Additionally, base- and bear-case assumptions help quantify the question of how far through the writedown story we are. Under our base case, we would be nearly three-quarters of the way through total writedowns, while even under bear case assumptions slightly more than half of total writedowns have already been taken.

Comparing Marks

Having attempted to quantify current and future losses at a macro level, in Exhibit 4 we look more specifically at bank exposures to different sectors of credit assets, and where we estimate these were last marked. Broadly, we find no conclusive evidence that either region is clearly more aggressive, and note that some of the bias towards higher Alt-A and subprime marks in Europe may be the result of several large holders who have yet to report 1Q numbers.

Exhibit 4

No Great Atlantic Divide in Average Marks

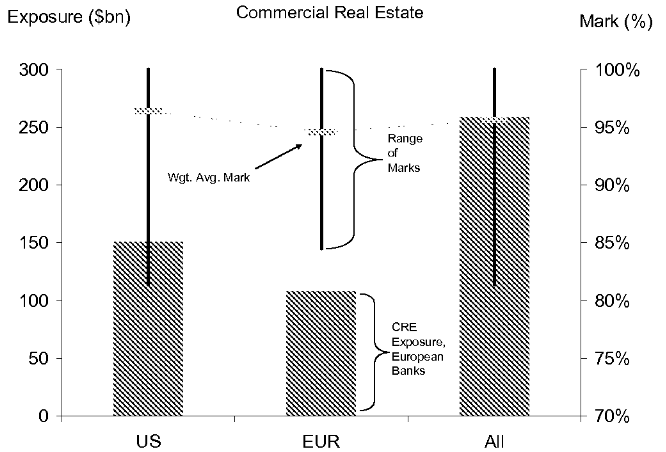
	Marks			
	US	Europe	Wtd. Average	Current Exposure Remaining ($bn)
ABS CDO Super-Senior				
High Grade	55%	56%	58%	$50
Mezzanine	34%	41%	38%	$21
ABS CDO, Not Super-Senior	21%	32%	28%	$5
Subprime RMBS				
Whole Loans/High-Quality	77%	68%	71%	$42
AAA (if specified)	88%	93%	91%	$14
Non-AAA (if specified)	17%	46%	34%	$5
Alt-A				
Whole Loans/High-Quality	86%	95%	89%	$81
AAA (if specified)	81%	88%	88%	$75
Commercial Real Estate	96%	95%	96%	$259
Leveraged Finance	93%	91%	92%	$335
Monoline Exposures	58%	68%	66%	$40
Other ABS	91%	98%	96%	$136

Source: Morgan Stanley Research, Company Reports

Exhibit 4 gives a top-down picture of the various assets, but we can also drill deeper to get a range of the marks. We use Commercial Real Estate exposure here as an example, which we summarize in Exhibit 5.

Exhibit 5

High/Low/Average of CRE Marks in US & Europe



Source: Morgan Stanley Research, company reports

In Exhibit 5 we denote the range of marks using the vertical black bars, and the weighted average marks with yellow lines, both on the right axis. Green histograms represent the exposure remaining, after losses, on the left axis.

While individual banks span a wider range, the aggregate story between regions is more similar. Weighted by exposure, US exposures to commercial real estate are carried at a value about 2% higher than those of their European counterparts. We note that exposures are very large here in notional terms, and many banks have taken little or no official impairment to date.

Using the same methodology as above, we chart exposures and the distribution of their marks for a much wider range of credit assets in the Appendix at the end of this report.

Decreasing Mark Dispersion

As we have noted before (see *CDO Market Insights: 2008 Outlook – Distress and Disequilibrium,* December 14, 2007), risk needs to change hands from the current holders of distressed securities (broker-dealers), whose business models and the regulatory framework render them inefficient holders of these types of risks to buyers of distressed securities who are efficient holders of this risk

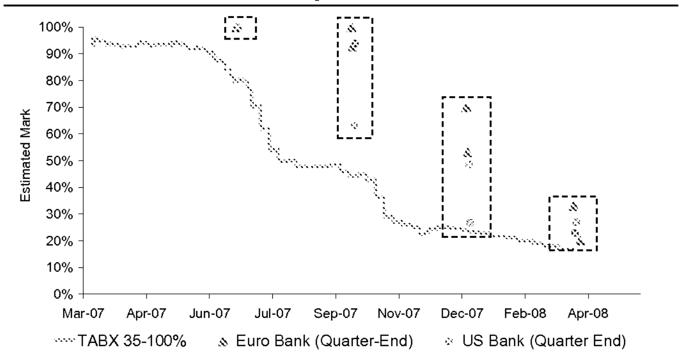
Until now, the wide dispersion of where these positions are marked and held by the largest holders of these hard-to-value assets has been the biggest constraint in the development of an actively traded distressed securities market. Late last year, we had posited that a convergence of marks for these assets and convergence towards the lower end of the spectrum, especially for senior/super senior tranches of subprime ABS, Alt-A and ABS CDOs, is necessary for active risk transfer to occur in the marketplace. Based on the first quarter 2008 marks, we think that banks have taken significant steps in the direction of converging marks toward secondary market levels where investors of distressed securities have a bid.

We see a lower intensity in coming markdowns driven by several factors. The first is that we've now seen significant exposure reported by the primary underwriters of ABS CDOs, the asset class responsible for roughly 50% of our study's total writedowns to date. Second, current marks in many assets are now much closer to observable, tradable market levels. And third, these tradable prices were baking in much more severe default scenarios and risk premiums at the end of March than was the case previously.

Dealer positions in Mezzanine ABS CDO Super-Senior provide a good illustration to this convergence. As a reminder, these positions are a senior claims on a portfolio of predominantly subprime RMBS securities, which are highly leveraged to losses on underlying subprime loan pools crossing an 8-10% threshold. As a proxy for this risk, we use TABX 35-100%, the senior-most claim on the 2006-vintage BBB securities (ABX 06-2 and 07-1). In Exhibit 6, we track the

Exhibit 6

Illustrating Mark Convergence: The Case of Mezzanine ABS CDO Super Senior Tranches



Source: Morgan Stanley Research, MarkIT, company reports

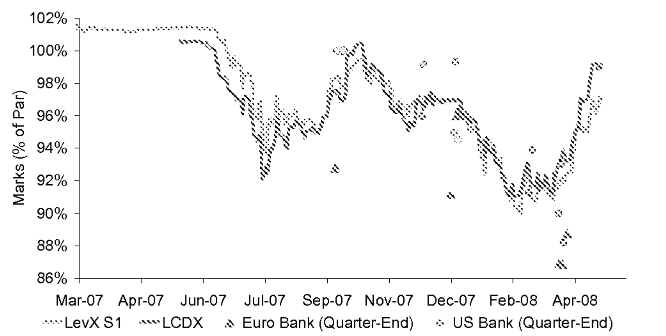
history of implied marks on these Super-senior positions by four banks with the largest exposure to the asset (two US, two European), versus a market proxy (TABX 35-100% tranche.)[1]

The adjustment of marks to underlying prices in ABS CDOs has come a long way. At the ends of 2Q, 3Q and 4Q 2007, a glaring gap existed between losses taken and the market proxy, a basis which drove the large losses realized in following reporting periods. While gaps do remain in several banks, the losses taken in the first quarter closed the basis between marks and the market substantially for our broader universe.

The history of marks versus the market also shows the value of having a liquid, tradable index. TABX BBB 35-100% was never terribly liquid, and it was an unmanaged, less diverse portfolio than the average ABS CDO. This made it easier to dismiss as an accurate proxy. But in leveraged loans, highly liquid indices existed that were a much closer proxy to loan risk actually sitting on bank books. Here, we see a very different historical picture of marks versus the tradable market.

Exhibit 7

Historical Marks on Leveraged Loans, vs. Indices



Source: Morgan Stanley Research, company reports

Leveraged Loan and ABS CDO exposures were generally both children of the same business: underwriting. But the losses taken on the two assets tell very different stories. In ABS CDOs, large losses and large surprises were the result of both a large initial gap between marks and their true value, and continued fundamental weakness, which pushed true value lower.

In contrast, as we show in Exhibit 7, the marks taken on loans by eight banks with the largest exposures (four European, four American) more closely track the underlying market of the time. Losses in the first quarter of 2008 were arguably more a function of beta, rather than closing a valuation gap, and we note the relative scales of Exhibits 6 and 7 to put the magnitude of impairment of these assets in perspective.

This distinction is important. By our calculations, several firms marked their leveraged finance exposure at quarter-end at prices below prevailing market levels, possibly to reduce position beta that was driving earnings volatility. With loan indices significantly higher since the end of March, we see

[1] We shift the bank's marks backwards from the reporting date to match marks to market environment.

some potential for "write-ups" if these levels can hold to next quarter. We do not, however, see potential for write-ups in ABS CDOs, and we expect those valuations to continue to head lower with deteriorating fundamentals. Additionally, given fundamental headwinds to Alt-A and subprime, we see greater hesitation to write-up these assets, relative to loans.

Beware the Gaps in the Hedges

We do not want our readers to mistake our broadly better feelings on bank writedowns with an all-clear whistle. At the single-name level, risks remain, and an unlikely culprit of future pain may well be the "hedges" that banks have deployed.

While reasonably accurate and liquid proxies exist for some stressed credit assets (leverage loans, for instance), many assets, including ABS CDOs, or Alt-A, are without a tradable doppelganger. Lacking a derivative index, banks have looked to buy protection directly on such an exposure on a name-by-name basis (a specific super-senior ABS CDO tranche), or to hedge it with a loosely related alternative.

However, both scenarios face serious drawbacks. The primary sellers of the single-name protection banks have purchased have been monoline insurers, whose difficulties are now well telegraphed. Several monolines have been downgraded below their hallowed AAA rating, and with several exceptions, even those still AAA-rated have been placed on negative watch. Most monolines now trade as stressed credits in CDS, despite their ratings, both a symptom and a cause of counterparty concerns. The banks in our study have already written off nearly $19 billion from the gains they expected from hedges facing monolines, taking on average 35¢ of impairment for every dollar gained from a monoline hedge. By our count, Europeans banks relied more heavily on monolines for protection than their American counterparts and continue to have greater exposure by a factor of roughly 3:1.

But looking for a broad-based, more liquid hedging alternative was also fraught with peril. We believe ABX and CMBX indices have been popular hedging vehicles for ABS CDOs and subprime RMBS, and commercial real estate, respectively. In particular, hedging activity has been heavy in the 'AAA' flavors of these indices, due to much lower cost, and better liquidity, than lower-rated sub-series.

While AAA ABS CDOs and AAA ABX may share a rating, and a relation to subprime loans, the similarities end there. Over the longer run we see dramatically different performance in these assets, driven by fundamentally different structures and collateral. We expect that early vintage ABX AAAs (2006-1 and 2006-2) have a high probability of realizing between $90 and par eventually, while we expect ABS CDO AAAs to languish in the $20-40 dollar range and possibly drift lower. Hedging of ABS CDO AAA exposure with ABX AAAs may therefore prove to be very ineffective over the long run.

Additionally, even in cases where the collateral more closely matches, such as subprime RMBS vs. the ABX, hedge performance will be affected by the high-beta nature of the latter. CDS will likely move much faster than the less liquid cash asset it was intended to hedge, a boon in a weakening market, but a potential problem in a rally.

Spreads Widen, Banks Lose. Spreads Rally…

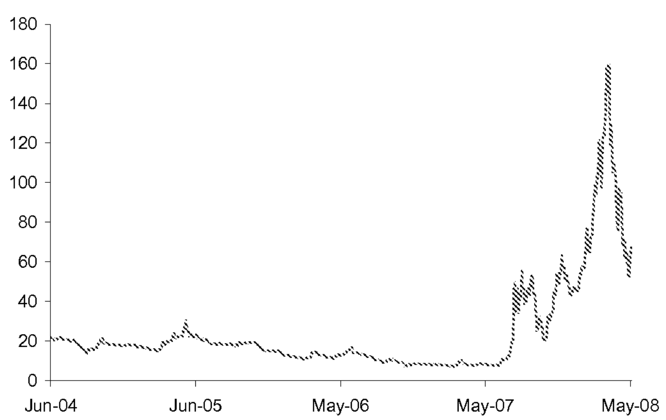
Our primary focus in this report has been asset writedowns, and the extent to which they drive tail risk, our ultimate concern as credit investors. While we believe tail risk has been largely reduced, we still see plenty of pain in the belly of the earnings distribution. Hedges, in the form of basis risk, would be one such driver.

Another factor (again somewhat ironic) is the recent rally in bank credit spreads. Under IAS 39, liabilities (i.e., the entity's own debt) can be marked to market, creating a gain recognized through P&L if credit spreads widen. Given the move wider in financial spreads through the first quarter, and a larger amount of bank funding via the bond markets, weaker credit has been an odd but material source of recent profits at banks (although use has varied widely). With spreads much tighter since mid-March, many of these gains will have to be given back. We must emphasize that we do not see these losses as large enough to revive fears of significant credit risk (if they were, and spreads widened, these losses would disappear back into profit). But we do think they can continue to challenge and frustrate the EPS outlook.

Add to this a looming flood of financial debt maturities. We estimate $535 billion in maturing debt for the remainder of the year for financials, which will no doubt be re-financed at significantly wider spreads relative to the currently maturing debt. Thus, the cost of financing for financials has no where to go but up, ensuring continued pressures on bank NIMs.

Exhibit 8

Tighter Financial Spreads Mean … Losses?

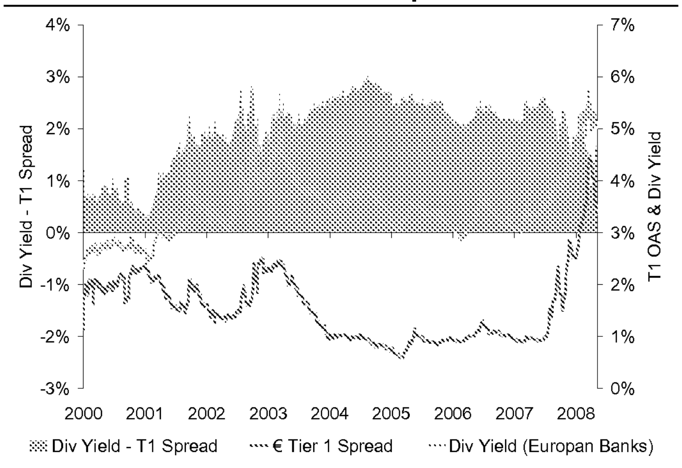


Source: Morgan Stanley Research, Bloomberg

With a multitude of challenges remaining to financial earnings, but tail risk materially reduced, we continue to see an investing environment in the financial sector that is more favorable to credit than equities. If one has little conviction on whether earnings will be +5% or -30%, but a great deal of the conviction that the bank will be a going concern, swapping out of bank equities for Tier 1 or Lower Tier 2 paper looks attractive. Financial subordinated debt is a simpler, more binary bet than the stocks, in our view, yet pays a similar risk premium.

Exhibit 9

Tier 1 Debt Still Attractive vs. Equities



Source: Morgan Stanley Research, iBoxx, Bloomberg

Conclusion: Out of the Frying Pan…

The drags on the credit markets – deleveraging, risk premia, counterparty exposure, and so on – have predominantly been systemic in nature, and systemic risks are inherently difficult to quantify. Earlier this year, our colleague David Greenlaw, along with other economists and academics, quantified the level of subprime losses and estimated the eventual knock-on effects.[2] In a similar spirit, albeit with significantly less academic rigor, we have attempted to formulate numbers to address the questions of balance sheet exposures, markdowns, and ensuing fallout in the financial sector.

Broadly, we see a changing nature to the writedown story, with less emphasis on systemic risk over the remainder of the year. We believe differentiation will be the theme, as assets with the weakest fundamentals, ABS CDOs in particular, will likely continue to bleed lower. Assets with a better fundamental story, such as leveraged loans, should be much easier to move off balance sheet for a small loss, or given the recent market rally, maybe a small gain. We caution against excessive enthusiasm for writeups, and in aggregate see the benefits of mark-ups in stronger, more liquid assets (such as leveraged loans) offset by the ineffectiveness of the hedges currently deployed against other positions. The troubles regarding hedging basis, higher costs of re-financing, and IAS 39 losses from tighter credit spreads may be unexpected thorns in the side of financials for the next several quarters. Issues here will unlikely be large enough to shock credit markets, but they have the potential to further frustrate equity investors.

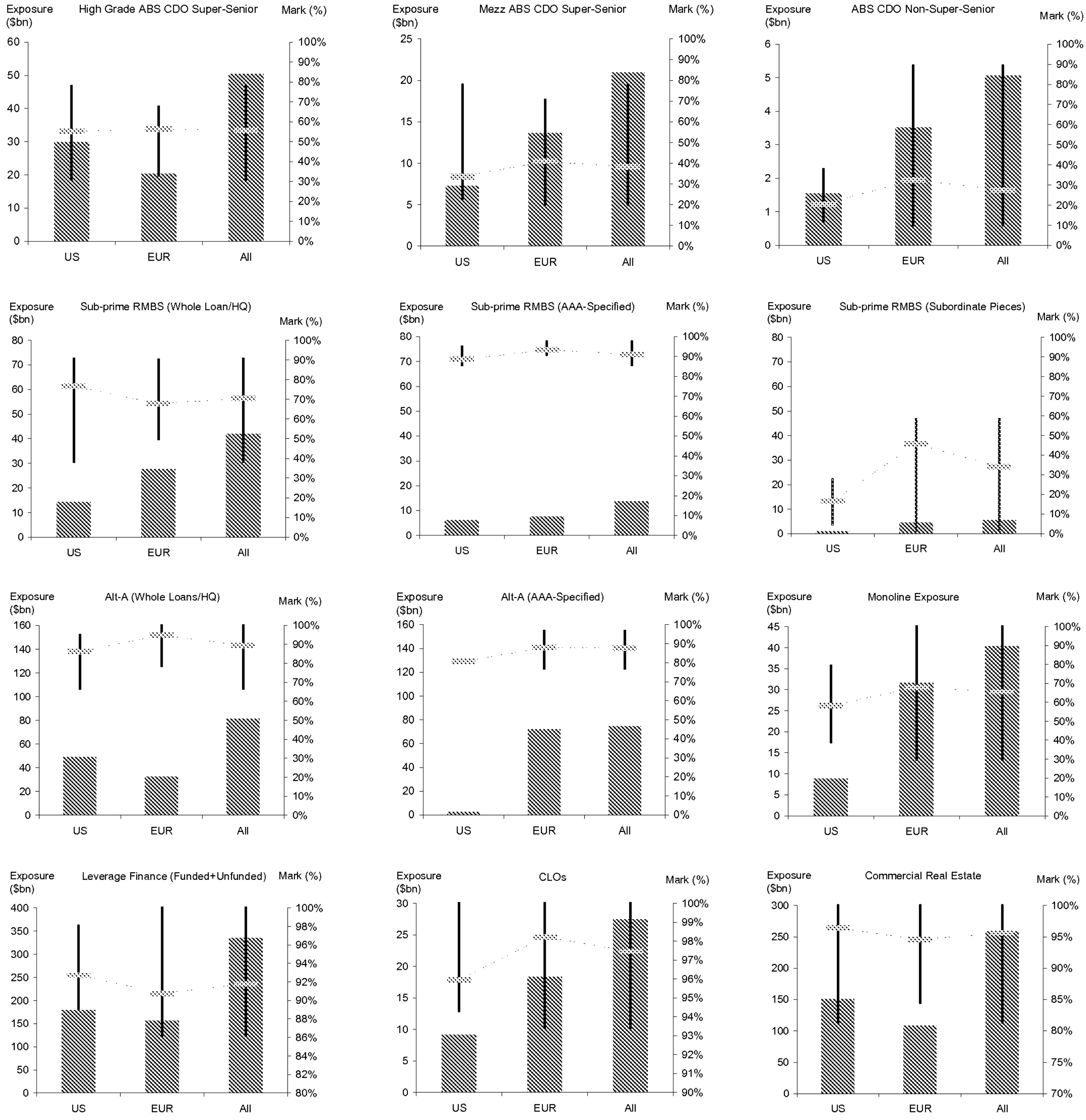
While we see the writedown story ebbing, higher provisioning by commercial banks is only starting – a theme that our equity research colleagues have been highlighting aggressively on both sides of the Atlantic. The asset markdowns taken to date reduce the risk of a "bolt from the blue," but a challenging earnings environment remains. As tail risk is reduced, and banks look to raise capital in front of a higher loss, we see an environment that is relativity more favorable to financial credit than equities.

Finally, while rarely painted as such by those who doubt them, generic talk of 'European Banks' all too often masks the diverse range of geographic concentration, funding positions, and business mix. As both the US and European economies slow in the second quarter, and as attention turns from writedowns to loss provisioning, this differentiation will drive performance.

[2] "Leveraged Losses: Lessons from the Mortgage Meltdown," David Greenlaw, Jan Hatzius, Anil K. Kashyap and Hyun Song Shin, US Monetary Policy Forum Conference paper, February 29, 2008.

Appendix I

Average Marks, Range of Marks, and Remaining Exposures, US & European Broker-Dealers



Source: Morgan Stanley Research, company reports

Credit Products Rating Distribution Table

(as of Apr 30, 2008)

	Coverage Universe		Investment Banking Clients (IBC)		
Rating	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight	74	35%	44	32%	59%
Equal-weight	85	40%	60	43%	71%
Underweight	54	25%	34	25%	63%
Total	213		138		

Coverage includes all companies that we currently rate. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

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Overweight (O) Over the next 6 months, the fixed income instrument's total return is expected to exceed the average total return of the relevant benchmark, as described in this report, on a risk adjusted basis.

Equal-weight (E) Over the next 6 months, the fixed income instrument's total return is expected to be in line with the average total return of the relevant benchmark, as described in this report, on a risk adjusted basis.

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