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**SOUTH KOREA**  
**Financial Services**  
**Asia Banks**

## Banks

Industry Overview

**Korean Banks and Hynix: Final Fantasy?**

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### Investment conclusion

- Hynix exposure continues to plague Korean state banks, but private banks have taken steps to dramatically reduce their outstanding credit.

### Summary

- Micron is reportedly close to an initial memorandum of understanding to purchase all or substantially all of Hynix's memory production assets, but any such MOU will probably be the beginning rather than the end of negotiations.
- As part of any transaction, creditor banks will have to sustain additional losses, with various sources putting Micron's debt forgiveness requests at 57-80% of remaining debt.
- KEB, Woori, and Chohung continue to have the largest exposure, with KEB's exposure actually increasing since our last note.
- Kookmin, Hana, KorAm, and Shinhan have all written off 100% of their loans to Hynix, reducing overall exposure to the company by 65%+.

The Hynix saga is promising to come to an end, at least insofar as it impacts Korea's major banks—but risks remain high for the company's lead lenders. Now that DRAM pricing has stabilized, Micron is reported to be close to an agreement to acquire Hynix's major memory chip assets, with government officials telling the marketplace to expect a memorandum of understanding before month-end. However, this pending act of closure seems to have led to a wave of excessive exuberance among investors.

Although Hynix is now at, or close to, break-even on an operating basis after the run-up in memory pricing, the company is still unable to service (much less repay) its \$7 billion debt load. We see no reason to believe that an acquisition by Micron would change the underlying economics of the business, and therefore it is generally accepted that Micron will not assume all Hynix's obligations.

Most Korean bankers accepted this fact some time ago, hence the refusal by healthy Korean banks and foreign banks to advance new funds to Hynix. The question remains: how big a write-down will be necessary for Micron to agree to take on Hynix? In our initial look at the problem back in August, we argued that Hynix exposure should at least be classified as 'Doubtful' loans, representing a required reserve of 50% under our methodology. This 50% level seems to have become a baseline, with reports that Micron has asked for a debt haircut of at least 57%—and by some estimates up to 80%.

Although such a deal would provide creditors with some cash, as well as restoring to health and creditworthiness a key client, lead bank KEB has publicly expressed serious reservations about the idea, with executive Lee Youn-soo widely quoted as saying "Creditors have already written off 50% of Hynix's debt through its previous bailout package. We believe that [any] further debt write-off is impossible." Note that KEB has actually increased its Hynix exposure since the beginning of Q3, and stands to lose 21% of its gross equity at a 57% loss level.

**Can Creditors Kill A Deal?** We think not. Although the government is taking a discreet back seat in negotiations, it will not, in our opinion, permit Hynix to be shut down, nor will it allow creditors to drag out the sale process past all point of reasonable hope. Remember that in the case of Daewoo Motors' sale to GM—a case involving an even larger debtor than Hynix—bank creditors in the end received less than 10% of the face value of their loans. A 43% recovery looks awfully good to us by comparison.

**What About A Partial Sale?** Another potential structure receiving attention is one which would have Micron purchasing only certain Hynix assets for \$2.5–3.5 billion, with creditors releasing their liens on the specific assets but

deferring cancellation of Hynix debt for a future negotiation with the company, rather than with Micron. We do not believe that this option would be likely produce more value for creditors overall, as it would strip the company of its most valuable assets and leave a less viable entity, which could defer its day of final judgement by using the sale proceeds.

From a bank sector perspective, we would be negatively disposed to any partial sale of assets which does not include segregation of proceeds and mandates they be used to pay down existing debt.

**Exposure Update:** Government bank KDB continues to have the largest total exposure, but among the private banks the consolidated Woori Financial Group (with lead bank Hanvit Bank) has now passed senior lender KEB as the largest creditor, with almost KRW1.1 trillion in gross exposure. Note from Table 2 that KEB's own exposure continues to increase, even as the "good banks" have largely eliminated their loans to Hynix.

Among institutions we cover, Kookmin, Shinhan, KorAm, and Hana have written down all Hynix loans to zero, dropping gross exposure by 65% or more in every case. We believe that as part of the Corporate Restructuring Promotion Act these banks have released their claims on Hynix, and forfeited their rights to any future recoveries on these loans, in return for not having to put up additional working capital.

**Table 1: Gross Hynix Exposure by Bank**

Bank	Gross Exposure, KRW MM		
	Total	Loans	Bonds
Korea Development Bank	1,100,000	NA	NA
KEB	920,000	200,000	720,000
Chohung	706,000	282,500	423,500
Woori	1,080,500	844,400	233,300
KFB	262,000	NA	NA
Shinhan	125,000	-	125,000
KorAm	55,000	-	55,000
Kookmin	174,000	-	174,000
Hana	56,600	-	56,600

Source: Company reports.

**Table 2: Change in Exposure: 9/1/01–Present**

Bank	Gross Exposure, KRW MM		
	Current	at 9/1/01	% Change
Korea Development Bank	1,100,000	NA	NA
KEB	920,000	875,294	+5.1%
Chohung	706,000	719,200	-1.8%
Woori*	1,080,500	838,000	+28.9%
KFB	262,000	206,395	+26.9%
Shinhan	125,000	366,000	-65.8%
KorAm	55,000	177,000	-68.9%
Kookmin	174,000	638,000	-72.7%
Hana	56,600	181,000	-68.7%

\* 9/1/01 figure is non-consolidated Hanvit Bank exposure only.

Source: Company reports.

Note that we consider KEB, Woori, and Chohung to be severely exposed to Hynix even post-4Q01 provisions—a very real concern for potential investors given the government's stated intention of full privatization of all three banks. Of the three, lead banker KEB would sustain the largest capital hit assuming a 57% loss ratio, at 21% of equity even after a profitable FY2001. Likewise, Woori's consolidated reserve shortfall of 13% of equity and Chohung's 9.9% are extremely material to our analysis.

In contrast, JP Morgan Chase's much lamented \$2.6 billion exposure to Enron—even if fully unsecured—gives rise to a reserve shortfall-to-equity position of only 4.8%, *less than one quarter of the magnitude of KEB's exposure.*

Table 3: Reserve Shortfall Versus Equity

	Total Exposure	Loan Loss Reserves			Shortfall/Equity	As of
		Required @57% loss	Actual Reserves	Reserve Shortfall		
KEB	920,000	524,400	174,800	349,600	20.6%	12/31/01
Woori	1,080,500	615,885	161,800	454,085	13.0%	09/30/01
Chohung	706,000	402,420	134,140	268,280	9.9%	12/31/01
KFB*	262,000	149,340	49,780	99,560	6.2%	09/30/01
KorAm	55,000	31,350	2,750	28,600	3.0%	12/31/01
Hana	56,600	32,262	11,320	20,942	1.3%	12/31/01
Kookmin	174,000	99,180	33,060	66,120	0.9%	12/31/01
Shinhan	125,000	71,250	5,000	66,250	0.6%	12/31/01

\* Exposure as of 1/17/01.

Source: Company reports; Lehman Brothers estimates.

### Related stocks

Company Name	Reuters Ticker	Price(21/01/02)	Rating
Kookmin Bank	6000.KS	(W 55000)	1 - Strong Buy
Shinhan Financial Group	5555.KS	(W 17700)	3 - Market Perform
KorAm Bank	16830.KS	(W 11850)	2 - Buy
Hana Bank	07360.KS	(W 15900)	2 - Buy

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This is a guide to expected total return (price performance plus dividend) relative to the total return of the stock's local market over the next 12 months.

1 = Strong Buy (expected to outperform the market by 15 or more percentage points); 2 = Buy (expected to outperform the market by 5-15 percentage points); 3 = Market Perform (expected to perform in line with the market, plus or minus 5 percentage points); 4 = Market Underperform (expected to underperform the market by 5-15 percentage points); 5 = Sell (expected to underperform the market by 15 or more percentage points).

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