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# Rapidly Deteriorating Shipping Markets Put Pressure On European Bank Ratings

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# Rapidly Deteriorating Shipping Markets Put Pressure On European Bank Ratings

Rapidly deteriorating conditions in the shipping sector are squeezing the ratings on European banks exposed to the shipping industry. Many shipping companies are struggling following a sharp downturn in global trade and challenging funding conditions. We expect these difficulties to result in a material increase in banks' loan loss provisions. We see pressure on banks coming from an increasing number of loan defaults, rapidly deteriorating shipping company credit quality, and weaker recovery expectations due to falling asset values. In addition, we believe banks' capital ratios may decline as deteriorating creditworthiness feeds through internal rating models and increases the relative risk-weighting under Basel II.

We recently reviewed our ratings on several European banks with meaningful shipping exposure (see table 1). The review focused on individual banks' exposure to the shipping sector. Our view of the quality of banks' shipping exposure together with our general concerns about asset quality in other sectors resulted in several negative outlook revisions and one CreditWatch placement. Ownership and/or government support played a pivotal role in raising the ratings on some banks above their stand-alone credit profiles.

In all these rating actions, we factored in our views of the resilience of the financial and asset quality metrics of individual banks and their ability to manage their respective shipping exposures. Our assessment incorporates our view of individual banks' capacity to reduce shipping-related losses through orderly workouts. Such capacity may be affected by an individual bank's credit strength and ownership structure, which could influence its ability to work through the foreclosure process.

In our view, the sector appears particularly exposed to the drybulk and container shipping segments, whose fundamentals are particularly weak. We see higher risks in respect of recent loans made during the shipping boom when asset values were at their peak and when underwriting was generally less stringent.

Following our review, we revised to negative the outlook on DnB NOR Bank ASA (AA-/Negative/A-1+) (Jan. 30, 2009), DVB Bank SE (A/Negative/A-1) (Jan. 30, 2009), and Norddeutsche Landesbank Girozentrale (A/Negative/A-1) (Feb. 2, 2009), and put the ratings on HSH Nordbank AG (A/Watch Neg/A-1) on CreditWatch with negative implications (Feb. 3, 2009). In 2008, our view of possible adverse exposure to shipping contributed to a negative outlook revision on NIBC Bank N.V. (BBB+/Negative/A-2) (Nov. 26, 2008). We concluded that deteriorating asset quality in ship financing is putting pressure on the stand-alone credit profile of Germany-based KfW IPEX-Bank GmbH (AA-/Stable/A-1+), but affirmed its ratings as they remain based on implicit owner support. We note that Nordea Bank AB (AA-/Stable/A-1+) has a large shipping loan book in absolute terms, but the negative impact is mitigated in our view by the solid performance of the bank's core Nordic banking operations. Royal Bank of Scotland Group PLC (A/Stable/A-1), a large shipping lender, was not included in the review given the relatively small proportion of its shipping loans to total assets (less than 3%).

Table 1

| Banks With Significant Shipping Exposure |   |                   |  |                          |                                   |                                 |                                |                        |  |
|--|---|-------------------|--|--------------------------|-----------------------------------|---------------------------------|--------------------------------|------------------------|--|
| June 30, 2008                            |   | Rating            | Ownership support factored into final rating | Reported Assets (bil. €) | Shipping Loans (estimate; bil. €) | Shipping Loans/Total assets (%) | Adjusted Total Equity (bil. €) | Pretax Profit (mil. €) |  |
| DnB NOR Bank ASA                         | * | AA-/Negative/A-1+ | No   | 169                      | 15                                | 9.0                             | 6.9                            | 570                    |  |
| DVB Bank SE                              |   | A/Negative/A-1    | Yes  | 13                       | 7                                 | 52.0                            | 0.8                            | 85                     |  |
| KfW IPEX-Bank GmbH                       |   | AA-/Stable/A-1+   | Yes  | 48                       | 5                                 | 10.0                            | 2.1                            | 86                     |  |
| NIBC Bank N.V.                           |   | BBB+/Negative/A-2 | No   | 29                       | 2                                 | 5.0                             | 1.5                            | 127                    |  |
| HSH Nordbank AG                          |   | A/Watch Neg/A-1   | Yes  | 204                      | 22                                | 11.0                            | 4.9                            | 99                     |  |
| Norddeutsche Landesbank Girozentrale     |   | A/Negative/A-1    | Yes  | 239                      | 15                                | 7.0                             | 6                              | 188                    |  |
| Nordea Bank AB                           | * | AA-/Stable/A-1+   | No   | 440                      | 14                                | 3.0                             | 14.5                           | 1,768                  |  |

\*Figures (except pre-tax profits) as of Sept. 30, 2008.

## Problems for shipping companies will impinge on bank performances

In our view, shipping portfolios are likely to prove one of the more troubled asset classes for banks over the medium term due to an extremely rapid and sharp deterioration of the shipping market in recent quarters. We expect that the downturn will be prolonged. Nevertheless, we expect the effect on European banks to be modest due to their moderate portfolio exposure to the shipping industry.

Our analysis focuses on the effect of rising loan impairments on banks' shipping portfolios and reduced earnings from declining loan origination and services. In our view, the latter is mitigated only by rising margins in ship lending in recent months. As the shipping industry is going through a difficult recession, we note that some banks will likely have to manage an increasing number of non-performing shipping loans and deal with foreclosed shipping assets. This in our view is likely to accelerate a generally expected weakening of asset quality in banks' wider loan portfolios as a result of globally deteriorating credit conditions.

The current downturn is likely to prove both deeper and longer than previous shipping downturns, which in our view could aggravate losses in the years ahead. In analyzing individual banks' vulnerability to potential shipping-related losses, we used scenario conditions more severe than those experienced in previous industry downcycles. We concluded that annual losses could surpass the previous peak loss levels, which rarely exceeded 2% of shipping loans.

Individual banks' overall vulnerability to ship financing could differ meaningfully, reflecting the extent of their shipping exposure relative to other lending, and the degree of lending to troubled sub-segments of the shipping industry, the drybulk and container segments in particular (see table 2). We see shipping loans originated between 2006 and 2008 as generally more vulnerable than those originated at other times due to potentially weaker underwriting standards and covenant structures, and higher asset values.

**Table 2**

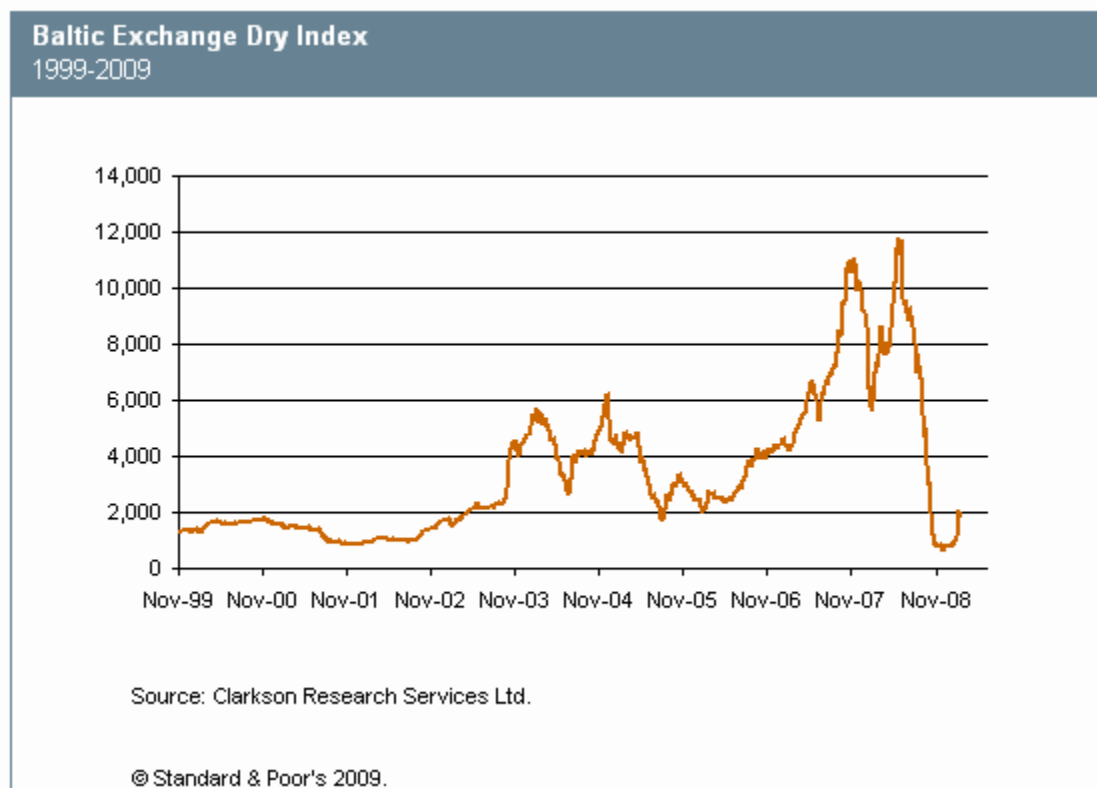
| <b>Distribution Of Individual Banks' Exposure</b> |                       |                         |                       |                        |                                |                    |                           |
|---|-----------------------|-------------------------|-----------------------|------------------------|--------------------------------|--------------------|---------------------------|
| (%)   | <b>Nordea Bank AB</b> | <b>DnB NOR Bank ASA</b> | <b>NIBC Bank N.V.</b> | <b>HSH Nordbank AG</b> | <b>Norddeutsche Landesbank</b> | <b>DVB Bank SE</b> | <b>KfW IPEX-Bank GmbH</b> |
| Shipping Assets/Total Assets                      | 4                     | 9                       | 5                     | 11                     | 7                              | 52                 | 10                        |
| Dry Bulk/Shipping Assets                          | 12                    | 16                      | 17                    | 15                     | 6                              | 18                 | 7                         |
| Container/Shipping Assets                         | 2                     | 13                      | 22                    | 47                     | 34                             | 11                 | 37                        |
| Tanker/Shipping Assets                            | 30                    | 8                       | 51                    | 18                     | 16                             | 22                 | 14                        |
| Offshore/Shipping Assets                          | 23                    | 47                      | 0                     | 4                      | 1                              | 20                 | 4                         |
| Other shipping/Shipping assets                    | 32                    | 16                      | 10                    | 16                     | 44                             | 29                 | 38                        |

All data for consolidated groups

We expect the risk of shipping-related loan losses in the current shipping cycle to increase due to banks' globally difficult economic and liquidity conditions. We believe more banks will come under pressure to sell foreclosed shipping assets near market lows than in previous downcycles.

## **Banks exposed to rapidly deteriorating ship market conditions**

Banks' shipping loan portfolios have generally performed well in recent years, reflecting an extended period of extremely strong market conditions for most segments of the shipping industry. We note, however, that the market for drybulk and container shipping deteriorated dramatically in the fourth quarter of 2008. This appears to be the result of a rapid slowdown in world trade because of weakening global economic conditions, growing ship capacity, and the effects of the financial and bank crisis on trade financing. The Baltic Dry Index, for example, fell by more than 94% to a record low of 663 in early December 2008 from its May 2008 high of 11,793 (see chart 1), while freight rates on the dominant East-West (Asia to Europe in particular) container routes have collapsed in recent months. These extremely challenging dry bulk and container liner shipping market conditions are expected to persist throughout 2009. See "Credit FAQ: Standard & Poor's Shipping Analysts Answer Investor Questions" published on RatingsDirect on Nov. 17, 2008.



We expect other shipping segments, including the tanker segment, to face challenging near-term market conditions as industry fundamentals deteriorate. Oil tanker demand is likely to fall as a result of cutbacks in OPEC production and a high pace of newbuilding deliveries which will pressure tanker freight rates through 2009. Similarly, offshore shipping freight rates are likely to weaken as a result of lower oil prices, which are expected to curtail oil exploration. Vehicle carriers have been impacted by weak new car sales globally, and the cruise industry is likely to be affected by a reduction in discretionary consumer spending.

Market imbalances are in our view aggravated by the large newbuilding orderbook across most segments. These vessels will be delivered during difficult market conditions with most having been ordered at high prices. All shipping sectors will likely be affected by the high prices paid for newbuildings in recent years. By our reckoning, these vessels will, on average, have to earn high freight rates to cover their purchase price and operating costs. With freight rates now very low in some segments, vessel operators look likely to incur substantial losses. Consequently, we expect that the downturn for shipping will be severe and prolonged. We expect some relief on supply-side pressure, however, to come from widespread newbuilding cancellations or deferrals, and subsequent bankruptcies at weaker shipyards or cancellation of new 'greenfield' shipyard projects, primarily in China. We believe this is most likely to affect deliveries in 2011 and 2012.

**Table 3**

| Current Fleet And Orderbook |                    |                      |                             |
|-----------------------------|--------------------|----------------------|-----------------------------|
| Sector                      | Current (mil. DWT) | Orderbook (mil. DWT) | Orderbook/current fleet (%) |
| <b>Dry bulk</b>             |                    |                      |                             |
| Capesize                    | 143                | 152                  | 107                         |

**Table 3**

| <b>Current Fleet And Orderbook (cont.)</b> |       |       |    |
|--|-------|-------|----|
| Panamax                                    | 114   | 61    | 53 |
| Handymax                                   | 83    | 54    | 65 |
| <b>Tankers</b>                             |       |       |    |
| VLCC                                       | 154   | 77    | 50 |
| Suezmax                                    | 55    | 28    | 50 |
| Aframax                                    | 81    | 27    | 33 |
| Clean products (Handysize)                 | 56    | 35    | 62 |
| <b>Containerships</b>                      |       |       |    |
| >3000 TEU                                  | 7,787 | 5,400 | 69 |
| 1000-2999 TEU                              | 3,583 | 638   | 18 |
| 100-999 TEU                                | 756   | 97    | 13 |

DWT-Dead weight tonnes. TEU-Twenty-foot equivalent units. Source: Clarkson Research Services Ltd.

In our view, banks' shipping portfolios are likely to suffer from widespread deterioration, because no shipping company appears insulated from the current fallout from the financial and shipping markets. Owners and operators alike will see their revenues pressured by falling demand and subsequently lower freight rates, some segments more dramatically than others. Consequently, we expect the performance and credit quality of shipping companies, and, consequently, banks' segmental results, to significantly weaken in the coming quarters. There are already examples of shipping companies finding themselves in financial difficulties, including defaults by previously-rated shipping companies U.S. Shipping Partners L.P. and Britannia Bulk PLC. As we believe that credit quality has deteriorated significantly, we expect many shipping company defaults in the next few quarters.

## Credit risk in banks' shipping portfolios likely to be sub-investment grade

Despite strong market conditions in recent years, we are of the view that overall credit risk in banks' shipping portfolios is sub-investment grade. We consider the shipping industry's risk profile generally to be speculative-grade due to its cyclical nature, capital intensity, high competition, vulnerability to system shocks, and frequent demand and supply imbalances, which contribute to volatile price swings in both freight rates and asset values (see tables 4 and 5). In our view, these factors are generally beyond companies' control. Consequently, shipping companies' and bank shipping portfolios' credit quality is restricted by industry risk, as this has a large bearing on earnings and success. Moreover, shipping companies are often highly leveraged, which further heightens credit risk. This reflects the capital intensity of shipping and the high cost of ship construction.

**Table 4**

| Sector          | <b>Shipping Earnings</b>  |                        |                    |                     |                     |  |
|-----------------|---------------------------|------------------------|--------------------|---------------------|---------------------|--|
|                 | <b>Earnings (\$/day)*</b> |                        |                    |                     |                     |  |
|                 | <b>Feb-09</b>             | <b>10-year average</b> | <b>10-year low</b> | <b>10-year high</b> | <b>2008 average</b> | <b>Peak to trough fall in earnings (%)</b> |
| <b>Dry bulk</b> |                           |                        |                    |                     |                     |  |
| Capesize        | 11,103                    | 47,768                 | 4,048              | 188,643             | 97,699              | 98   |
| Panamax         | 3,938                     | 24,076                 | 3,938              | 81,125              | 48,876              | 95   |
| Handymax        | 3,438                     | 19,493                 | 4,438              | 57,350              | 36,245              | 92   |

Table 4

| Shipping Earnings (cont.)  |        |        |        |         |        |    |
|----------------------------|--------|--------|--------|---------|--------|----|
| <b>Tankers</b>             |        |        |        |         |        |    |
| VLCC                       | 82,370 | 48,603 | 10,780 | 203,897 | 95,788 | 95 |
| Suezmax                    | 42,188 | 45,448 | 8,318  | 140,516 | 71,433 | 94 |
| Aframax                    | 32,821 | 34,966 | 9,530  | 87,863  | 49,990 | 89 |
| Clean products (Handysize) | 15,362 | 25,258 | 8,542  | 47,279  | 27,856 | 82 |
| <b>Containers**§</b>       |        |        |        |         |        |    |
| 4400 TEU                   | 15,000 | 36,221 | 15,000 | 50,000  | 29,708 | 70 |
| 2750 TEU                   | 9,000  | 27,602 | 9,000  | 40,000  | 21,958 | 78 |
| 1700 TEU                   | 6,200  | 19,375 | 6,200  | 32,500  | 14,108 | 81 |

**\*Monthly average spot earnings \*\*Monthly average timecharter rates**

§Historical earnings levels based on 5-year data. VLCC--Very large crude carrier. TEU--Twenty foot equivalent units.

Bank lending to shipping companies with significant spot market exposure is most exposed to weak market conditions. Fixed rate long-term charters generally provide a measure of protection against falling freight rates. However, we note that shipping companies have seen charter defaults or failure by charter parties to honor commitments under existing contracts, which has resulted in early redelivery of ships in difficult market conditions. The dry bulk market is likely to experience this to a greater extent than tanker operators, as dry bulk counterparties are generally of lower credit quality than the oil majors that dominate tanker shipping chartering. For more details on shipping company rating methodology, please see "Key Rating Factors For Shipping Companies", published on RatingsDirect on March 30, 2006.

## Difficult banking and financial market conditions likely to exacerbate shipping industry challenges

The disruption of the financial markets and banking sector is likely to aggravate an already difficult situation for shipping companies, and in turn reduce the quality of banks' shipping exposures. Not only has trade financing slowed, debt financing for shipping companies is difficult to obtain or refinance. This results from banks' reduced willingness to lend to high risk sectors such as shipping. This in turn will likely lead to increased default risk in bank shipping loan portfolios. This contrasts with previous years when equity and bank funding was readily and cheaply available for even weak shipping companies.

We are of the view that shipping companies' ability to maintain adequate liquidity will be critical if they are to withstand current industry challenges. Liquidity, however, seems as scarce for shipping companies as it is for the banks themselves.

Banks face, we believe, increasing risk in their ship financing activities. In our view, the main risks for shipping companies include prospective near-term covenant breaches (especially market value and earnings related breaches), weak cash flows, dependence on asset sales to meet maturities or obtain waivers, and near-term refinancing risk--all in the context of a potential credit crunch.

We believe the current vessel orderbook represents a threat to banks' collateral values, and substantial liquidity/financing risk for shipping companies. Many shipping companies are contracted to take delivery of vessels

over the next two to three years at prices locked in at the peak of the cycle. With vessel prices likely to have fallen by up to 60% in some segments from their peak in July 2008, external financing could prove difficult given that lenders now face their own liquidity constraints and in view of much tighter lending standards in general.

Access to, and cost of, funding is likely to determine shipping companies' success. First, distressed shipping companies may find it difficult to obtain financing to roll over maturities or to meet ongoing operating needs. Second, we believe that pricing is likely to be substantially higher than in the past few years for those that have access to financing, which will put further pressure on already reduced cash flows.

## **Banks' underwriting quality and industry experience will help curtail prospective losses**

Our view is that, historically, a combination of high-quality underwriting and prudent collateral management in times of stress have enabled many surviving specialized ship finance banks to contain their losses. In the past, single-year peak losses have rarely exceeded 2% of shipping loans. We have observed that strong underwriting quality features often include average loan-to-value ratios of below 70% (based on historical asset value lows), predominant financing of vessels under long-term fixed employment with creditworthy charterparties, steep amortization profiles, strict covenants, and recourse to modern and attractive collateral in the event of creditor non-performance.

In our view, however, no bank appears immune to weaker structured shipping loans of more recent vintage. These loans were signed when competition for new and repeat business was at its peak. We think this is a particular problem for loans generated between 2006 and 2008.

During past downturns, we have observed shipping banks acting proactively on problem loans by dealing directly with the client to find credit enhancing measures to reduce the risk of non-payment. Such patient handling of delinquencies and the ability to renegotiate payment terms appear to be able to provide temporary, yet important, relief for weaker borrowers and enable higher recovery rates for banks. These tactics have helped banks navigate through short shipping slumps in the past, but weak shipping companies are likely to be increasingly challenged to service their debt this time round as the current downturn is likely to be long and deep. Consequently, we believe a sharp rise in covenant breaches and, ultimately, shipping company defaults, is imminent in the quarters ahead.

## **Bank risk management may underestimate shipping loan risks**

We are aware of the possibility that some banks have underestimated the high cyclicity and default risk in the shipping sector and overestimated the collateral value of their security.

Our assessment of individual banks' shipping portfolios may be more pessimistic than banks' own estimates. The shipping companies that we rate are typically in the 'BB' and 'B' rating categories, which would indicate an average one-year probability of default (PD) of 0.99%-4.51% (see "2008 Annual Global Corporate Default Study And Rating Transitions" published on RatingsDirect on Feb. 25, 2009) according to our historical default data. Our PD calculation represents an average through-the-cycle default rate for these rating categories. Given our pessimistic outlook for the global economy, we believe the number of speculative grade ('BB+' or lower) defaults could reach 10% or higher in Europe (see "Weakening Performance And Liquidity Drive European Credit Trends From Bad To Worse" published on RatingsDirect on Dec. 17, 2008).

We believe that banks' internal credit scores of their shipping company clients may significantly migrate downwards in 2009 as a consequence of a near-term increase in default risk in the shipping sector. As the deterioration in shipping industry conditions has been rapid and extreme, we believe that the downward movement of these internal scores could be sudden and sharp (to the extent that these scores do not reflect current conditions). Sharp downward migrations may accelerate banks' loan loss provisions, raise levels of risk weighted assets, and put additional pressure on capital ratios.

## Collateral values

Recovery estimates on vessels serving as collateral security for shipping loans could be overestimated by banks following recent sharp drops in ship values from historical highs.

While banks may have generally refrained from using recent peak pricing for second-hand and newbuilt vessels when determining collateral values, we believe that fluctuating second-hand ship prices over the past 10 years (see table 5) in all segments suggest potential recovery risk when assessing loss given default estimates. As an example, banks report that a large number of shipping companies are already in breach of the minimum value clauses stipulated in their financial covenants. We believe asset values have deteriorated significantly in 2009.

**Table 5**

| Vessel Prices      |                              |           |           |            |                         |                              |         |           |           |            |                         |
|--------------------|------------------------------|-----------|-----------|------------|-------------------------|------------------------------|---------|-----------|-----------|------------|-------------------------|
| Sector             | Newbuilding prices (mil. \$) |           |           |            |                         | Second hand prices (mil. \$) |         |           |           |            |                         |
|                    | Current                      | 10-yr avg | 10-yr low | 10-yr high | Peak to trough fall (%) | 2008 avg                     | Current | 10-yr avg | 10-yr low | 10-yr high | Peak to trough fall (%) |
| <b>Dry bulk</b>    |                              |           |           |            |                         |                              |         |           |           |            |                         |
| Capesize           | 86                           | 55        | 32        | 99         | 68                      | 88                           | N.A.    | 48        | 22        | 130        | 83                      |
| Panamax            | 45                           | 32        | 26        | 55         | 53                      | 47                           | N.A.    | 33        | 14        | 59         | 77                      |
| Handymax           | 40                           | 28        | 8         | 49         | 85                      | 42                           | N.A.    | 28        | 13        | 75         | 83                      |
| <b>Tankers</b>     |                              |           |           |            |                         |                              |         |           |           |            |                         |
| VLCC               | 139                          | 99        | 63        | 162        | 61                      | 150                          | N.A.    | 88        | 50        | 165        | 70                      |
| Suezmax            | 80                           | 63        | 43        | 100        | 58                      | 91                           | N.A.    | 60        | 35        | 105        | 67                      |
| Aframax            | 68                           | 51        | 33        | 83         | 60                      | 75                           | N.A.    | 47        | 24        | 79         | 70                      |
| Product tanker     | 45                           | 37        | 26        | 54         | 51                      | 48                           | N.A.    | 28        | 16        | 47         | 67                      |
| <b>Containers*</b> |                              |           |           |            |                         |                              |         |           |           |            |                         |
| 6200/6500 TEU      | 94                           | 97        | 71        | 108        | 34                      | 100                          | N.A.    | N.A.      | N.A.      | N.A.       | N.A.                    |
| 2750 TEU           | 43                           | 69        | 37        | 57         | 35                      | 50                           | N.A.    | 37        | 22        | 46         | 53                      |
| 1700 TEU           | 32                           | 58        | 31        | 43         | 29                      | 38                           | N.A.    | 26        | 15        | 28         | 47                      |

\*Five-year historical averages. VLCC--Very large crude carrier. TEU--Twenty-foot equivalent units. N.A.--Not available.

In the past, an important factor in minimizing shipping loan losses in a downturn has been how banks foreclosed and realized upon their vessel security. We note that banks rarely resorted to firesales of foreclosed vessels when market values were depressed, but tried to redeploy or lay-up vessels while waiting for the cycle to turn before making a disposal.

Foreclosure and realization is critical. Significant loan-to-value cushions (up to 60% in certain segments) are likely to have evaporated and are not likely to be restored soon. In what appears to be developing into a deep, long, and internationally widespread shipping and economic downturn, the ability to manage losses could be limited, particularly in the absence of strong ownership support. Moreover, we believe that tight liquidity conditions in the capital markets, diminished flexibility to cross-subsidize from other operations, and heightened pressure to avert risk will exacerbate the pressure on banks. Consequently, we expect fewer banks to be able to avoid distressed sales in what could prove to be tough years ahead, reducing the likelihood of writebacks on prudent provisioning when the market eventually recovers.

## Loan loss provisioning to increase rapidly from record lows

We note that until the third quarter of 2008, most banks' loan loss provisions against their shipping portfolios were at historic lows--well below 20 basis points for most banks in recent years. We now expect that a number of banks will report much increased loan loss provisions in 2009, reflecting higher loss expectations from increasing defaults, and internal credit score migration capturing the ongoing deterioration of the shipping industry. As credit score migration is likely to continue in the next few years, it will increase unexpected losses and lead to a higher risk-weighting of assets in accordance with Basel II, reflecting increased risk profiles of bank portfolios. In turn, this could pressure banks' capital ratios further, as the denominator (risk weighted assets) in the capital calculation will increase.

When combining an increase in PDs with the potential for reduced collateral recovery values (the inverse of loss given default), the risk in banks' shipping portfolios could, in our view, rise to an historical peak. If, for example, shipping portfolio PDs were to rise from 1% to 10%, combined with a drop in recovery rates to 40% from 70%, a bank would need to increase its provisions almost twentyfold (the expected loss would rise to 6% from 0.3%), and face quadrupled demand for regulatory capital (the unexpected loss would increase to 22% from 5.2%) in accordance with advanced Basel II stipulations (see table 6). For more details see "Credit FAQ: S&P Responds To Market's Questions About Its Risk-Adjusted Capital Framework For Banks", published on RatingsDirect on Dec. 2, 2008).

**Table 6**

| Regulatory Capital Charge And Expected Loss Under Basel II (IRB Advanced Approach) |       |        |       |        |       |        |       |        |        |        |        |        |
|--|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|--------|--------|
| Probability Of Default Assumption  | 0.5%  |        | 1.0%  |        | 2.0%  |        | 5.0%  |        | 10.0%  |        | 15.0%  |        |
|  | EL    | UL     | EL    | UL     | EL    | UL     | EL    | UL     | EL     | UL     | EL     | UL     |
| 10%  | 0.05% | 1.31%  | 0.10% | 1.74%  | 0.20% | 2.17%  | 0.50% | 2.82%  | 1.00%  | 3.64%  | 1.50%  | 4.18%  |
| 20%  | 0.10% | 2.62%  | 0.20% | 3.47%  | 0.40% | 4.34%  | 1.00% | 5.65%  | 2.00%  | 7.28%  | 3.00%  | 8.35%  |
| 30%  | 0.15% | 3.94%  | 0.30% | 5.21%  | 0.60% | 6.50%  | 1.50% | 8.47%  | 3.00%  | 10.95% | 4.50%  | 12.53% |
| 40%  | 0.20% | 5.25%  | 0.40% | 6.94%  | 0.80% | 8.67%  | 2.00% | 11.30% | 4.00%  | 14.56% | 6.00%  | 16.70% |
| 50%  | 0.25% | 6.56%  | 0.50% | 8.68%  | 1.00% | 10.84% | 2.50% | 14.12% | 5.00%  | 18.22% | 7.50%  | 20.88% |
| 60%  | 0.30% | 7.87%  | 0.60% | 10.42% | 1.20% | 13.01% | 3.00% | 16.94% | 6.00%  | 21.86% | 9.00%  | 25.06% |
| 70%  | 0.35% | 9.18%  | 0.70% | 12.15% | 1.40% | 15.18% | 3.50% | 19.77% | 7.00%  | 25.50% | 10.50% | 29.23% |
| 80%  | 0.40% | 10.50% | 0.80% | 13.89% | 1.60% | 17.34% | 4.00% | 22.59% | 8.00%  | 29.15% | 12.00% | 33.41% |
| 90%  | 0.45% | 11.81% | 0.90% | 15.62% | 1.80% | 19.51% | 4.50% | 25.42% | 9.00%  | 32.79% | 13.50% | 37.58% |
| 100%   | 0.50% | 13.12% | 1.00% | 17.36% | 2.00% | 21.68% | 5.00% | 28.24% | 10.00% | 36.43% | 15.00% | 41.76% |

**Table 6**

**Regulatory Capital Charge And Expected Loss Under Basel II (IRB Advanced Approach) (cont.)**

EL--Expected loss. UL--Unexpected loss. Based on an assumed average exposure of €50 mil. and an average maturity profile per exposure of 2.5 years under Basel II.

## Shipping exposures may continue to exert rating pressures on individual banks

As a result of the global economic slowdown and capital market crisis, we have assigned negative outlooks to most rated banks globally, including those with substantial exposure to the shipping industry (see "Industry Report Card: Extraordinary Times, Extraordinary Responses--External Support For Major European Bank Ratings In The Face Of Acute Market Difficulties", published Nov. 5, 2008 on RatingsDirect).

We have revised the outlook on some banks mentioned in this article to negative to reflect the additional pressure on their asset quality as a result of the prospects facing the shipping industry. Although exposure to the shipping industry has put downward pressure on some ratings, the relative impact of other factors varies from bank to bank. For some ratings, we are of the opinion that ownership support is pivotal.

We believe the credit profiles of ship finance banks could deteriorate further in 2009, not only as a result of their shipping portfolios, but because of weakening asset quality across many other loan segments as well. Accordingly, we may take further negative rating actions if market conditions deteriorate more than we expect. Specifically, we may reassess individual banks if the quality of their shipping portfolios deteriorates beyond our current expectations.

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