Basel Committee on Banking Supervision  
Bank for International Settlements,  
CH-4002 BASEL  
Switzerland  

May 28, 2001  

Re: Comments on the New Basel Capital Accord  

Dear Sirs,  

We are pleased to submit herewith our comments on the Second Consultative Package with respect to the New Basel Capital Accord as published in January 2001.  

By way of background, ABN AMRO Lease Holding N.V. (AALH) is a Dutch based holding for a group of companies providing vehicle leasing and fleet management services to corporate clients in 27 countries. With more than 1.2 million vehicles under management, of which 620,000 are funded, AALH is one of the leading fleet leasing and fleet management companies in the world. AALH is fully licensed as a credit institution since 1993 and is supervised by The Dutch Central Bank.  

Introduction  

Based on our long experience as a vehicle lessor in all major markets in the world, vehicles represent excellent collateral to reduce credit risk. We therefore ask the Committee to include (leased) vehicle collateral as Eligible Collateral under both the standardised and the foundation IRB approaches to credit risk.  

In the following we will demonstrate that Loss Given Default (LGD) percentages for vehicle-collateralised exposures are well beneath the 50% assumed under the IRB foundation approach for uncollateralised exposures or exposures collateralised by ineligible collateral. We will also propose a fleet valuation methodology and estimate market price volatility over an appropriate haircut period in order to come up with a haircut for establishing conservative collateral values.  

The analysis presented is based on the UK market where used vehicle prices have lost a third of their value in the last 3 - 4 years. This represents far more volatility than any other major market and as such the resulting estimates of LGD and market volatility can be regarded as 'conservative.' The high volatility of the UK market is clear from the graph overleaf.
Eligible collateral

Vehicle collateral fits all the criteria for eligible collateral as mentioned in the Second Consultative Package. Vehicles can be revalued reliably on the basis of periodically published market guide prices and/or depreciation curves. They also maintain their value over time with less volatility than equities, bonds or gold. As the legal owner, the lessor has clear rights over the vehicle and may repossess and liquidate the vehicle in the event of a default, insolvency or bankruptcy. Such liquidation can be executed in a timely fashion (e.g. through established auctions) at relatively low liquidation costs. Legal enforceability is further enhanced by the elaborate vehicle title registration systems adopted by most countries.

Loss Given Default

LGDs have been determined using defaults from a 50,000 vehicle fleet in the UK over as long a period as possible using as large a sample as possible, the size of the sample being restricted only by the default definition and data availability.

LGDs have been estimated for obligors that went 90 days in arrears, filed for bankruptcy or incurred a write-off. LGDs have also been estimated for two further groups that should provide larger LGD figures. These groups are obligors that went 90 days in arrears and terminated early and contracts that ended in the vehicle being repossessed (i.e. a vehicle that was not returned voluntarily). The former group provides a feel for LGD on 90-day arrears contracts excluding those that are just
playing the system and will pay on final demand. In terms of the time taken to retrieve the vehicle and the eventual condition of the vehicle the LGD on repossessed vehicles presents a worst case scenario.

In the interest of producing conservative LGD figures, the estimates presented in the table below relate strictly to the leasing of the vehicle. Additions such as maintenance agreements, insurance or vehicle rescue services have been excluded from the calculation. Such factors would on average increase profits and subsequently reduce the average LGD.

**Table 1: LGD by Default Category**

<table>
<thead>
<tr>
<th>Default Category</th>
<th>Sample Duration (Year)</th>
<th>Sample Size (Contracts)</th>
<th>LGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 + Arrears</td>
<td>93-01</td>
<td>2787</td>
<td>-4.8%</td>
</tr>
<tr>
<td>Insolvents</td>
<td>91-01</td>
<td>2367</td>
<td>15.4%</td>
</tr>
<tr>
<td>Write-Offs</td>
<td>92-01</td>
<td>669</td>
<td>16.6%</td>
</tr>
<tr>
<td>90 + Arrears &amp; Early Term.</td>
<td>93-01</td>
<td>537</td>
<td>22.7%</td>
</tr>
<tr>
<td>Repossession</td>
<td>94-01</td>
<td>318</td>
<td>23.0%</td>
</tr>
</tbody>
</table>

01 = January - March 2001

It can be seen from the above table that the 90+ Arrears definition of default actually results in a negative LGD value of -4.8%. That is, on average these contracts actually made, a 4.8% profit. At the other extreme, repossessed vehicles, which accounts for a small proportion of actual defaults, produced average LGD figures of 23%. This is less than half the 50% LGD assumed under the foundation IRB approach for uncollateralised exposures or exposures collateralised by ineligible collateral.

**Valuation of Vehicle Collateral**

The steps below represent a recommended methodology for the valuation of a vehicle fleet. A basic valuation can be achieved using Steps 1 or 2 independently. Steps 3 to 6, however, will improve the valuation accuracy.

*Step 1: Marking-to-Market with market guide prices*

Where market guide prices are available they should be used to mark the fleet to market. This is recommended as the basis of a valuation because of a guide’s comprehensive market coverage and the level of information the prices incorporate. It also allows individual vehicles to be marked directly to market. In the UK this step enables around 95% of the fleet to be valued.
**Step 2: Depreciation curves**

When a new vehicle model is launched it takes time before a sufficient number of these vehicles reach the used car market to enable a market guide price to be quoted. Disposal data also would not be available for these vehicles. In such cases a valuation can be made from the last known value (the Capital Cost) using depreciation curves. A relatively contemporary measure of depreciation should be used which reflects the current relationship between vintages. The depreciation curves can be measured using market guide prices or disposal data where accurate guide prices are not readily available.

**Step 3: Inflation adjustment**

If depreciation curves have been used it would be appropriate to use an inflation adjustment reflecting market volatility between the date of the last known value and the current valuation date. This would require building indices of market inflation. As Graph 1 showed, this has been a significant factor in the UK.

**Step 4: Disposals adjustment**

Aggregate disposal adjustments would improve the accuracy of the valuation. This adjustment would reflect factors specific to leasing company such as choice of sales channels, the general condition of the vehicles or the ability of the disposals team.

The adjustment would also reflect the quality of the market guide. In the UK this would be small (about 1%) but in countries with systematically inaccurate guides the disposal adjustment would be a more important method of improving accuracy.

**Step 5: Excess mileage adjustment**

In valuing a fleet it is not always possible to directly observe the actual vehicle mileage at the time of valuation. To avoid this problem it is recommended that the contracted mileage be combined with an excess mileage adjustment to produce an estimated mileage at the time of valuation. That is, the contracted mileage should be adjusted by the propensity of customers to overshoot/undershoot the contracted mileage. This should then be prorated back over the life of the contract to achieve an estimated mileage at the time of valuation.

**Step 6: Forward looking elements**

The seasonal element of used car price movements means a valuation will quickly become dated. In order to improve the accuracy of the valuation it would be appropriate to take account of such systematic factors in the valuation.
Collateral Haircuts

The collateral haircut is addressed in two sections, the Haircut Period and Market Volatility. By identifying a typical haircut period it is possible to measure market volatility relative to this period, thus measuring a market volatility that is comparable with a collateral haircut under the New Accord.

Haircut Period

The haircut period should represent the time period between the last valuation before default and the final vehicle sale date. Here an attempt is made to quantify a typical haircut period. Figures relate strictly to the UK market but are considered to be representative for most developed markets.

The table below represents the average time taken from contract termination to disposal of the vehicle. This has been identified for the same default groups used to estimate LGD.

Table 2: Time between contract termination and vehicle disposal

<table>
<thead>
<tr>
<th>Default Category</th>
<th>Average Period (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90+ Arrears</td>
<td>20</td>
</tr>
<tr>
<td>90+ Arrears &amp; Early Term.</td>
<td>26</td>
</tr>
<tr>
<td>Write-Offs</td>
<td>38</td>
</tr>
<tr>
<td>Insolvent</td>
<td>53</td>
</tr>
<tr>
<td>Repossessions</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
</tr>
</tbody>
</table>

Another key element of the haircut period is the time between valuations. Given that guide prices tend to be published monthly or quarterly it is likely that valuations will also occur monthly or quarterly. To estimate a conservative haircut period it is assumed the valuation occurs quarterly, which adds 3 months to the haircut period.

The time taken to identify a default and the time taken to terminate a contract after default also need to be included. The precise date that a default occurs and how long it takes to identify the default, however, can be ambiguous, depending on the chosen method of measurement. For our purposes a period of 1 month, is assumed to represent these factors. This reflects, in part, the 10 day notification period before a contract can be terminated and the average of 20 days taken to be notified of an insolvency.
By adding this month to the 3 months between valuations and the time taken to sell a vehicle after contract termination it is possible to come up with a conservative estimate of the haircut period of 6 months.

*Market Volatility*

Taking this estimated haircut period into account market price volatility for individual vehicles has been estimated over 6-month periods. The estimates are presented in the table below.

**Table 3: Market Price Volatility over a 6-Month Period**

<table>
<thead>
<tr>
<th>Market Sector</th>
<th>Average Price Movement</th>
<th>Standard Deviation</th>
<th>99% Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermini</td>
<td>-1%</td>
<td>8%</td>
<td>21%</td>
</tr>
<tr>
<td>Lower Mini</td>
<td>-1%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>Upper Medium</td>
<td>-1%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>Executive Luxury</td>
<td>-1%</td>
<td>8%</td>
<td>19%</td>
</tr>
<tr>
<td>MPV</td>
<td>-2%</td>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td>Off Road Fashion</td>
<td>-2%</td>
<td>6%</td>
<td>16%</td>
</tr>
<tr>
<td>Off Road Proper</td>
<td>-1%</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Sports</td>
<td>1%</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>Market Average</td>
<td>-1%</td>
<td>8%</td>
<td>20%</td>
</tr>
</tbody>
</table>

*The 99% confidence interval assumes a standard normal distribution.*

*Sample Period: Jan-90 - March-01*

It can be seen that, even in what has been a very volatile market, 99% of vehicle prices lie within 20% of their value 6 months previously. This picture is relatively consistent across all sectors of the market.

A substantial portion of this volatility can be attributed to seasonality. In the UK seasonal movements have a standard deviation of 3%, almost half of the total volatility. Given the impact of seasonality it is recommended that a forward-looking seasonal adjustment be built into the valuation.

In addition to market volatility the haircut should also take into account the systemic decline in value over the haircut period due to depreciation. Depreciation of vehicles is on average less than 1.5% per month. A 10% systemic decline in value over a 6-month haircut period is therefore conservative. A total haircut of 30% (20% due to market volatility and 10% due to depreciation) over a haircut period of 6 months is therefore proposed.
Summary

- Over the last 5 years used car prices in the UK have lost a third of their value, mainly as part of the European harmonisation in car prices (UK market substantially above other European countries). This makes the UK market more volatile than any other major market. As such the provided estimates of LGD and market volatility can be regarded as extremely conservative.¹

- LGD for a large UK vehicle leasing company was found to be under 25%, less than half the LGD assumed under the foundation IRB approach for uncollateralised exposures or exposures collateralised by ineligible collateral.

- It is possible to produce a systematic fleet valuation based on market guide prices or internal disposal data.

- A conservative estimate of the average time between the last valuation before default and vehicle sales date is 6 months. Using price data as far back as 1990, 99% of market prices were found to be within 20% of their value 6 months previously.

- A 30% haircut is proposed using a 6-month haircut period based on quarterly revaluations and a 3-month default-to-liquidation period.

Should you require further data or explanation on our point of view expressed in this letter, please do not hesitate to contact us. This letter has been copied to our supervisor: the Dutch Central Bank and to the Chairman of our Supervisory Board, Mr Tom de Swaan.

Yours Sincerely,

Marco Coppoolse
Chief Financial Officer
ABN AMRO Lease Holding N.V.

Cc:
Rinus van der Struis / Jules van Sijs, The Dutch Central Bank
Tom de Swaan, Chairman Supervisory Board ABN AMRO Lease Holding N.V.
Maarten Mes, ABN AMRO Lease Holding N.V. / Ivan Brunette Lease Plan UK

¹ For general market data on the development of (second-hand) car prices in Europe see www.eurocarprice.com. Credit Suisse First Boston is amongst the parties involved in this (second hand) car data research.