Microsoft Corporation
Capital Structure

Case Study

Ruben D. Cohen
Financial Statement

- Simplified financial statement as of 3Q2008
- Market cap of $233B is used
- Debt of 0.01 is used so underlying program does not crash
- AAA Credit rating calculated at zero leverage

<table>
<thead>
<tr>
<th>TABLE I</th>
<th>Income Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating EBITDA</td>
<td>24,548.0</td>
</tr>
<tr>
<td>D&amp;A</td>
<td>-2,056.0</td>
</tr>
<tr>
<td>EBIT</td>
<td>22,492.0</td>
</tr>
<tr>
<td>Other income</td>
<td>1,322.0</td>
</tr>
<tr>
<td>Gross interest expense</td>
<td>0.0</td>
</tr>
<tr>
<td>EBT</td>
<td>23,814.0</td>
</tr>
<tr>
<td>Tax</td>
<td>-6,133.0</td>
</tr>
<tr>
<td>Net profits</td>
<td>17,681.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Balance Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Market equity</td>
</tr>
<tr>
<td>Debt</td>
</tr>
<tr>
<td>Total liab. &amp; equity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE II</th>
<th>Input/Output Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective tax rate</td>
<td>26%</td>
</tr>
<tr>
<td>Pre-tax cost of debt</td>
<td>5.00%</td>
</tr>
<tr>
<td>Implied spread</td>
<td>0.24%</td>
</tr>
<tr>
<td>Implied risk-free rate</td>
<td>4.76%</td>
</tr>
<tr>
<td>Implied rating</td>
<td>AAA</td>
</tr>
<tr>
<td>V = D+E</td>
<td>233,000.0</td>
</tr>
<tr>
<td>V^* = D^*+E</td>
<td>233,000.0</td>
</tr>
<tr>
<td>V_u^<em>=(1-T)D^</em>+E</td>
<td>233,000.0</td>
</tr>
</tbody>
</table>
Capital Structure Curve

Model output shows the company’s “value” curve based on the financial statement shown on the previous page. This is the inverse of the WACC curve.

Ruben D. Cohen
In the News

Microsoft plans debt issue, $40b share buyback\(^1\)

- 23 September 2008 09:25AM

Microsoft plans to buy back its own stock, lift its dividend and issue commercial paper for the first time in the company's history. Microsoft's announcement of a share buyback of up to US$40 billion was joined by that of top PC maker Hewlett-Packard, which announced a share buyback of its own.
Model Output – Scenario 1

New capital structure curve after a $40B debt-financed equity buyback

The model shows that $40B will push the capital structure beyond the optimal, giving it a new rating of BBB (red point in graph). There is also a slight drop in the EBIT due to the debt-equity swap. Will Microsoft be happy with this? Not very likely!

Ruben D. Cohen
Model Output – Scenario 2

Examine different scenario of capital structure after a $30B debt-financed equity buyback

<table>
<thead>
<tr>
<th>Table III</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional equity</strong></td>
<td>-30,000</td>
</tr>
<tr>
<td><strong>Additonal debt</strong></td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Total additional assets</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>% Impact on EBIT</strong></td>
<td>-2%</td>
</tr>
</tbody>
</table>

The model shows that $30B will push the capital structure closer to the optimal, giving it a new rating of A- (red point in graph). There is, again, a slight drop in EBIT because of the swap. In terms of getting closer to the optimal, $30B is perhaps a better amount to consider for Microsoft’s objective, however it is still beyond optimal.

*Ruben D. Cohen*
Model Output – Scenario 3

Capital structure curve after a $40B equity buyback financed by $20B debt issue + $20B cash

This scenario will push the capital structure to the optimal, giving it a new rating of AA- (red point in graph). Given the large amount of cash in its balance sheet, this scenario is perhaps a better one to consider for Microsoft’s objective, if it is to achieve optimal capital structure. In terms of EBIT, however, there is a significant drop of 10% due to contraction in size. Ruben D. Cohen
References

MS Excel Model for Microsoft Corp Case Study:
http://rdcohen.50megs.com/Case_Studies/Microsoft_Corp.xls

Methodology:
http://rdcohen.50megs.com/OCSababstract.htm

Other material at:
http://rdcohen.50megs.com/capstruct.htm