M9.2
Understanding the Business Through Reformulated Financial Statements: Chubb Corporation

Introduction

This case is well worth covering if you plan to work the Chubb valuation case, M13.1 in Chapter 13. It sets up the reformulated financial statements for that case and, more importantly, gets students to understand (via those reformulated statements) how an insurance company adds value. This case and M13.1 can be rolled into one presentation.

Take the students through the business model for a property-casualty insurer and how that business model should be reflected in the (reformulated) financial statements:

A property-casualty insurer underwrites losses by collecting cash from insurance premiums and paying out cash for loss claims. There is a timing difference between cash in (from premiums) and cash out (in claims paid) – the float – and the insurer plays the float by investing it in securities and other investments. Effectively the policyholders provide cash that is invested in investment assets. In the reformulated balance sheet, the float is represented by negative net operating assets. So the reformulated balance sheet depicts the two aspects of the business – the negative net operating assets in underwriting and the positive investment in securities (which is also part of operations). Accordingly, the reformulated balance sheet takes the following form:

\[
\text{Net operating assets in underwriting operations} + \text{Net operating assets in investments} = \text{Total net operating assets} - \text{Financing debt} = \text{Common equity}
\]

NOA in underwriting is negative.

The investment assets also serve as reserves against claims in the underwriting business and the type of investments are constrained by regulation to make sure the reserves are not too risky.

Corresponding to the reformulated balance sheet, the reformulated income statement separates income from underwriting activities from income from investment activities. The reformulated income statement combines net income with other comprehensive income (of
course), which is quite important for insurance companies (and other institutions with investment portfolios): This negates any effects of cherry picking into the income statement.

*The Reformulated Balance Sheet*

Here is Chubb’s reformulated statement. It follows the reported statement closely as that statement clearly separates investment assets from operating assets used in underwriting and real estate.
Chubb Corp.
Reformulated Balance Sheet, December 31, 2007

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Underwriting operations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>49</td>
<td>38</td>
</tr>
<tr>
<td>Premiums receivable</td>
<td>2,227</td>
<td>2,314</td>
</tr>
<tr>
<td>Reinsurance recoverable on unpaid claims</td>
<td>2,307</td>
<td>2,594</td>
</tr>
<tr>
<td>Prepaid reinsurance premiums</td>
<td>392</td>
<td>354</td>
</tr>
<tr>
<td>Deferred policy acquisition costs</td>
<td>1,556</td>
<td>1,480</td>
</tr>
<tr>
<td>Deferred income tax</td>
<td>442</td>
<td>591</td>
</tr>
<tr>
<td>Goodwill</td>
<td>467</td>
<td>467</td>
</tr>
<tr>
<td>Other assets</td>
<td>1,366</td>
<td>1,715</td>
</tr>
<tr>
<td><strong>Total operating assets</strong></td>
<td>8,806</td>
<td>9,553</td>
</tr>
<tr>
<td><strong>Operating liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid claims and loss expenses</td>
<td>22,623</td>
<td>22,293</td>
</tr>
<tr>
<td>Unearned premiums</td>
<td>6,599</td>
<td>6,546</td>
</tr>
<tr>
<td>Accrued expenses and other liabilities</td>
<td>2,090</td>
<td>31,312</td>
</tr>
<tr>
<td><strong>Net operating assets- underwriting</strong></td>
<td>(22,506)</td>
<td>(21,671)</td>
</tr>
<tr>
<td><strong>Investment operations:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term investments</td>
<td>1,839</td>
<td>2,254</td>
</tr>
<tr>
<td>Fixed maturity investment-held to maturity</td>
<td>-</td>
<td>135</td>
</tr>
<tr>
<td>Fixed maturity investment-available for sale</td>
<td>33,871</td>
<td>31,831</td>
</tr>
<tr>
<td>Equity investments</td>
<td>2,320</td>
<td>1,957</td>
</tr>
<tr>
<td>Other invested assets</td>
<td>2,051</td>
<td>1,516</td>
</tr>
<tr>
<td>Accrued investment income</td>
<td>440</td>
<td>40,521</td>
</tr>
<tr>
<td><strong>Total net operating assets</strong></td>
<td>18,015</td>
<td>16,433</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>3,460</td>
<td>2,466</td>
</tr>
<tr>
<td><strong>Common shareholders’ equity</strong></td>
<td>14,555</td>
<td>13,967</td>
</tr>
<tr>
<td>As reported</td>
<td>14,445</td>
<td>13,863</td>
</tr>
<tr>
<td>Dividends payable</td>
<td>110</td>
<td>104</td>
</tr>
<tr>
<td><strong>Total common shareholders’ equity</strong></td>
<td>14,555</td>
<td>13,967</td>
</tr>
</tbody>
</table>
Notes:

1. Dividends payable has been reclassified as shareholders’ equity.

2. “Other invested assets” ($2,051 in 2007) are investments in private equity limited partnerships are carried in the balance sheet as Chubb’s share in the partnership based on valuation provided by the private equity manager. Changes in these valuations are recorded as part of realized investment gains and losses in the income statement.

The negative NOA in underwriting activities represents the float. The investment assets, though they look like financial assets, are operating assets because a firm cannot run a risk underwriting business without the reserves in the assets. Indeed, insurers typically make their money from investing the float in these assets. The separation identifies two aspects of the business, one where value is created (or lost) through underwriting and one where value is created (or lost) in investment operations.

The Reformulated Income Statement

Rather than reporting other comprehensive income within the equity statement, Chubb reports a separate comprehensive income statement (below the income statement in the case). The reformulated statement combines the two statements and separates the two types of operations. Like the reformulated balance sheet, it separates the earnings from investing from earnings from insurance underwriting. With this reformulation, one gets a better insight into the business.
Reformulated Income Statement, Year Ended December 31, 2007 (in $ millions)
Underwriting operations:

Premiums earned 11,946

Claims and expenses:

Insurance losses 6,299
Amortization of deferred policy acquisition costs 3,092
Other operating costs 444

Total claims and expenses 9,835

Operating income before tax-underwriting 2,111

Corporate and other expenses 300

Operating income before tax, underwriting and other 1,811

Income tax reported 1,130
Tax on investment income 663
Core operating income after tax - underwriting 1,344

Currency translation gain, after tax 125
Additional pension cost 108

Operating income after tax, underwriting and other 1,452

Investment operations:

Before-tax revenues:

Investment income-taxable\(^2\) (1738-232) 1,506
Realized investment gains 374
Other revenue 49

Total before-tax revenues 1,929

Investment expenses 35

Income before tax 1,894
Tax (at 35%) 663

Income after tax 1,231

Investment income-tax exempt 232
Unrealized investment gain after tax 134

Comprehensive income 3,049
Notes:

1. Currency translation gains are identified with underwriting in other countries. These gains are reported after tax in the comprehensive income statement.
2. Realized investment gains include gains and losses from revaluations of interests in private equity partnerships. See note to the reformulated balance sheet.
3. Taxable investment income is total investment income minus tax-exempt income of $232 million. The $232 million of tax-exempt income is added after tax is assessed.

Note the following:

1. Placing the income statement on a comprehensive basis gives a more complete picture. The net income is misleading because it omits unrealized gains and losses from available-for-sale securities. A firm can “cherry pick” realized gains by selling the securities in its portfolio that have appreciated. Comprehensive income includes the income from (available-for-sale) securities that have dropped in value, so one gets the results for the whole investment portfolio. For Chubb in 2007, unrealized gains (not losses) are reported, so there is no indication of cherry picking (at least on a net basis).

2. Taxes are allocated between the investment operations and the underwriting (and other) operation. The tax rate of 35% is applied only to taxable investment income (not the tax exempt income).

Note further, that the income from underwriting is usually quite small. Indeed, in many years, insurance firms make losses on underwriting. Yet they add value: Minicase M13.1 provides the explanation.

Here are answers to the questions in the case:
A. All available-for-sale securities and trading securities must be market to market. Only held-to-maturity securities are carried at cost. See Accounting Clinic III.

B. See the explanation in the discussion above: insurance companies generate a “float” which they then invest in securities.

C. The two types of income come from activities that add value quite differently. Further, the investment activity can usually be valued using mark to market accounting, not so the underwriting activity. Minicase 13.1 takes this a lot further.

D. Yes, to pick up any cherry picking. Comprehensive income reporting gives the performance for the whole investment portfolio, whether returns were realized or not.

E. The value of the equity is made up as follows:

\[
\text{Value of equity} = \text{Value of underwriting operation} + \text{Value of investments} - \text{Debt}
\]

As the investment operation is marked to market (for the large part), its value is approximately its book value ($40,521 million). (There is a question regarding the private equity investments in “other invested assets” that are revalued by the private equity manager (but may not always to marked to market of fair value.) Similarly, the book value of the debt is close to market value. The market value of the equity can be calculated by looking up the per-share price ($54) of the 374.65 million outstanding shares: $54 \times 374.65 = $20,231 million. Thus

\[
$20,231 = \text{Value of underwriting business} + $40,521 - $3,460
\]

Accordingly, the value of the underwriting business is -$16,830.

How can the value be negative?? Well, it can. This is a case of operating liability leverage adding value. Go to Minicase 13.1.