

LIFE INSURANCE AND RETIREMENT VALUATION

MODULE 7: LIABILITIES ON THE BALANCE SHEET





Module 7

LIABILITIES ON THE BALANCE SHEET



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7. Liabilities on the Balance Sheet

This module addresses the following learning objectives:

| Item | Unit/Key Performance Objective/Learning Objective |
|-------|--|
| 3 | Prepare a valuation of life insurance or retirement fund liabilities |
| 3.1 | Consider the characteristics of policy and benefit liabilities |
| 3.1.2 | Understand how liability values are reflected in accounts |

This module examines the way that valuation results affect the published balance sheet.



7.1. The company balance sheet

A company's balance sheet is intended to present a true and fair view of its financial position at a point in time. The balance sheet summarises the valuation of the assets and liabilities of the entity, in accordance with local accounting rules.

Life companies have liabilities other than policy liabilities on their balance sheet. For example, they may have amounts owed to creditors who have provided goods or services but have not yet been paid. These are often short term and were discussed in Module 4 (Liabilities). Policy liabilities, on the other-hand, are generally long-term liabilities and usually make up the largest liability item on a company's balance sheet.

For a company to be solvent from an accounting perspective, the total value of its assets must at least equal that of its liabilities.

Exercise 7.1

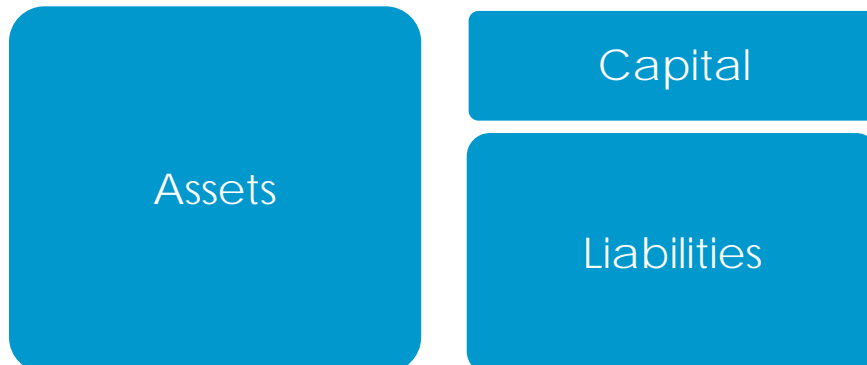
If the value of a company's assets at any point are less than the value of its liabilities, the company is technically insolvent. In practice, this may be addressed through measures such as capital injections from shareholders. If the company is unable to address this technical insolvency in a timely way, it may face severe consequences such as the forced winding up of its operations.

However, a solvent company may be unable to pay its debts when they are due. Why might this occur?

The excess of the value of assets over liabilities is typically referred to as *capital*. It may be referred to as reserves or equity. This is illustrated in Figure 7.1.



Figure 7.1: Capital



Insurance regulators throughout the world are concerned with setting capital adequacy standards to ensure that companies retain sufficient additional assets to support future obligations in a range of more adverse circumstances. Regulators may set specific capital adequacy rules, specific margins or may require companies to take a conservative approach in valuing policy liabilities, creating implicit capital adequacy margins.

Life insurers are usually required to hold capital to cover a range of risks including insurance, market, credit and operational risks. These risks and required capital are discussed further in Module 13 (Risk management) and Module 14 (Capital).

The difference between a retirement fund's assets and liabilities is referred to as *reserves*. Reserves may be made up of prudential, operational, investment and risk reserves as well as unallocated member monies. For example, defined contribution funds may be required to hold a reserve to cover operational risks.

This module will continue to use the generic term *capital*.



The amount of capital required by prudential regulators can be referred to as prudential capital adequacy (PCA) margins and are depicted in Figure 7.2.

Figure 7.2: Prudential capital adequacy margins



Capital comprises the sum of “PCA margins” and “excess assets” from Figure 7.2.

While PCA margins are required to provide an additional buffer against adverse future experience, excess assets may be used to meet the costs of business expansion or improvement or to pay dividends.

The management of capital for ongoing capital adequacy for life insurers and retirement fund trustees is covered under Module 14 (Capital).

7.2. Impact of retained profit on the balance sheet

Module 6 (Profit) looked at the impact of liability valuations on a life insurer’s estimated profit. A number of examples were included in the module to illustrate this concept. Some of these examples have been repeated below, to illustrate how profits impact a company’s balance sheet.



Table 7.1 shows cash flows and liabilities for a 5-year level premium term policy. The pricing basis and assumptions are not important in this section, as the focus is on illustrating how various items are reflected in the balance sheet. In the example in Table 7.1, liability values at year end are zero; that is, any obligations that are not settled within the year are ignored in determining liability values.

Table 7.1: Annual profit with liabilities set to zero

| Year | Premiums | Claims | Expenses | Net Cash Flow | Liability | Profit |
|------|----------|--------|----------|---------------|-----------|--------|
| 1 | 781 | -620 | 0 | 161 | 0 | 161 |
| 2 | 659 | -591 | 0 | 68 | 0 | 68 |
| 3 | 589 | -598 | 0 | -9 | 0 | -9 |
| 4 | 526 | -605 | 0 | -78 | 0 | -78 |
| 5 | 469 | -611 | 0 | -142 | 0 | -142 |

Throughout this section, profit each year is calculated as income less outgo less the change in the value of liabilities over the year. Since liability values are zero in this example, profit is just the net cash flows.

Assuming the policy modelled in Table 7.1 is the only policy written by the company, the balance sheet at the end of Year 1 is shown in Figure 7.3.

Figure 7.3: Balance sheet at end of Year 1 (liabilities set to zero)



Capital is equal to the value of assets less liabilities. Since we have, in this example, ignored the value of any outstanding obligations, the value of reported assets at the end of Year 1 equals the value of retained profit earned over the year (\$161). We know from Table 7.1 that this profit will be required to meet obligations in future years. This example



simply shows how the balance sheet would be presented if we ignored outstanding liabilities.

By the end of Year 5, the retained profits from Years 1 and 2 have been used to pay the future cash flow shortfalls. The balance sheet at the end of Year 5 is shown in Figure 7.4.

Figure 7.4: Balance sheet at end of Year 5 (liabilities set to zero)



Had the company distributed the profits in Year 1 and Year 2, it would have become insolvent in Year 3 when cash flows were negative.

If the company had calculated the value of policy liabilities at the end of each year as the amount needed to meet future claims less future premium income, the profit each year would be zero, as shown in Table 7.2.

Table 7.2: Annual profits under realistic valuation basis

| Year | Premiums | Claims | Expenses | Net Cash Flow | Liability | Change in Liability | Profit |
|------|----------|--------|----------|---------------|-----------|---------------------|--------|
| 1 | 781 | -620 | 0 | 161 | 161 | -161 | 0 |
| 2 | 659 | -591 | 0 | 68 | 229 | -68 | 0 |
| 3 | 589 | -598 | 0 | -9 | 220 | +9 | 0 |
| 4 | 526 | -605 | 0 | -78 | 142 | +78 | 0 |
| 5 | 469 | -611 | 0 | -142 | 0 | +142 | 0 |

The balance sheet at the end of Year 1, shown in Figure 7.5, now more realistically reflects the company's position, with the expected negative cash flows in Years 3 to 5 being recognised as liabilities. The liability of 161 at the end of Year 1 equals $-(68 - 9 - 78 - 142)$.



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Figure 7.5: Balance sheet at end of Year 1 (realistic valuation basis)



In the above example, the liability was calculated to exactly meet expected future payments less claims. There was no margin allowed for adverse future scenarios, such as where claims are higher than expected.

If, in a particular jurisdiction, liabilities for accounting purposes are based on conservative valuation bases, this would impact profit emerging each year and amounts shown on the balance sheet at different points in time. For example, if the liability reported in the company's accounts includes an implicit margin for conservatism, say 2% of expected future premiums, the results would be as shown in Table 7.3.

Table 7.3: Annual profits under conservative valuation basis

| Year | Premiums | Claims | Expenses | Net Cash Flow | Liability | Change in liability | Profit ¹ |
|------|----------|--------|----------|---------------|-----------|---------------------|---------------------|
| 1 | 781 | -620 | 0 | 161 | 206 | -206 | -45 |
| 2 | 659 | -591 | 0 | 68 | 261 | -55 | 13 |
| 3 | 589 | -598 | 0 | -9 | 240 | +20 | 12 |
| 4 | 526 | -605 | 0 | -78 | 151 | +89 | 11 |
| 5 | 469 | -611 | 0 | -142 | 0 | +151 | 9 |

¹ As discussed in Module 6 (Profit), profit in this table should really be referred to as *surplus*, due to the conservative liability basis used. For consistency throughout the module and to avoid confusion, we continue to refer to it as profit here.

The total profit over the five years is again zero as in the previous two examples. This is driven by the policy being priced to break even and the actual cash flows over the five years emerging as expected.



The balance sheet at the end of Year 1 under this conservative valuation basis is shown in Figure 7.6.

Figure 7.6: Balance sheet at end of Year 1 (conservative valuation basis)



In this example, the cash flow in Year 1 (161) is not sufficient to support the additional margins required and further funds of 45 ($206 - 161$) would be required. These could be sourced via a capital injection from shareholders or by borrowing funds from a creditor. These additional margins are released in later years as the business runs off. These funds would be required at the start of Year 1.

The profits in Years 2–5, shown in Table 7.3, would then, logically, be considered a return of the capital that shareholders had invested in the business (or a repayment of any loans taken out), rather than profit. While liability values that include conservative margins, as calculated in Table 7.3, enhance the capital adequacy position of the company, they may not provide the most meaningful basis for assessing profit from year to year, as discussed in Module 6 (Profit).



7.3. Example from a company report

Figure 7.7 shows an example balance sheet from the Clearview Annual Report 2017.

Figure 7.7: Example balance sheet

| | Note | Consolidated | | Company | |
|---|------|------------------|------------------|----------------|----------------|
| | | 2017 \$'000 | 2016 \$'000 | 2017 \$'000 | 2016 \$'000 |
| Assets | | | | | |
| Cash and cash equivalents | 15 | 222,197 | 217,673 | 5,880 | 20,889 |
| Investments | 16 | 1,814,049 | 1,615,226 | 377,159 | 354,158 |
| Receivables | 17 | 37,947 | 16,097 | 13,689 | 11,855 |
| Fixed Interest deposits | 18 | 78,327 | 79,584 | - | - |
| Reinsurers' share of life Insurance policy liabilities | 25 | 15,338 | (703) | - | - |
| Current tax assets | | - | 641 | - | 641 |
| Deferred tax asset | 24 | 10,509 | 10,801 | 310 | 573 |
| Property, plant and equipment | 21 | 1,425 | 1,823 | - | - |
| Goodwill | 19 | 20,452 | 19,952 | - | - |
| Intangible assets | 20 | 24,202 | 28,428 | - | - |
| Total assets | | 2,224,446 | 1,989,522 | 397,038 | 388,116 |
| Liabilities | | | | | |
| Payables | 22 | 39,909 | 35,619 | 352 | 780 |
| Current tax liabilities | | 523 | - | 523 | - |
| Provisions | 23 | 8,460 | 5,215 | 18 | 26 |
| Life Insurance policy liabilities | 25 | (207,632) | (203,830) | - | - |
| Life Investment policy liabilities | 25 | 1,177,290 | 1,152,554 | - | - |
| Liability to non-controlling interest in controlled unit trusts | | 788,427 | 587,205 | - | - |
| Deferred tax liabilities | 24 | 1,819 | 996 | 591 | - |
| Total liabilities | | 1,808,796 | 1,577,759 | 1,484 | 806 |
| Net assets | | 415,650 | 411,763 | 395,554 | 387,310 |
| Equity | | | | | |
| Issued capital | 26 | 421,717 | 417,850 | 421,717 | 417,850 |
| Retained losses | 12 | (15,648) | (12,344) | (61,379) | (57,887) |
| Executive Share Plan Reserve | 12 | 10,068 | 8,342 | 10,068 | 8,342 |
| Profit reserve | 12 | - | - | 25,635 | 21,090 |
| General reserve | 12 | (487) | (2,085) | (487) | (2,085) |
| Total equity | | 415,650 | 411,763 | 395,554 | 387,310 |

To be read in conjunction with the accompanying Notes.

The company reports total "equity" of \$415.650m, which is equal to the net assets of the business (i.e. total assets of \$2,224.446m less total liabilities of \$1,808.796m). This equity item was referred to as "Capital" in previous sections of the module. It represents the value of shareholders' interest or share of the assets on the balance sheet.



The largest liability item shown in Figure 7.7 is the item “Life Investment policy liabilities” of \$1,177.290m. As the name suggests, these liabilities arise from the issue of policies with a savings or investment component.

The value of “Life Insurance policy liabilities” is $-\$207.632\text{m}$. This means that the value of future income from the company’s life insurance business is expected to exceed the value of future expenses and claims. This may reflect a deferred acquisition cost allowance [see Module 6 (Profit)]. For this company, the value of its life insurance policy liabilities reduces the value of the company’s total liabilities and therefore increases the net assets. A negative liability is effectively a positive asset.

In Figure 7.7, a reference is made to Note 25 in relation to life investment and life insurance policy liabilities. Note 25 would contain further information for the user on the company’s financial statements concerning the components underlying these policy liability calculations.

7.4. Key learning points

- A company or fund’s balance sheet summarises the valuation of its assets and liabilities and is intended to present a true and fair view of its financial position at a point in time.
- For a life company to be solvent, the total value of its assets must at least equal that of its liabilities.
- The difference between a life insurance company assets and liabilities is referred to as *capital*. Capital is made up of prudential capital adequacy margins and excess assets.
- Excess assets held by a life insurance company may be used to meet the costs of business expansion, to pay dividends or for other purposes.
- The difference between a retirement fund’s assets and liabilities is referred to as *reserves*. Reserves may be made up of prudential, operational, investment and risk reserves as well as unallocated member monies.



7.5. Answers to exercises

Exercise 7.1:

If the value of a company's assets at any point are less than the value of its liabilities, the company is technically insolvent. In practice, this may be addressed through measures such as capital injections from shareholders. If the company is unable to address this technical insolvency in a timely way, it may face severe consequences such as the forced winding up of its operations.

However, a company with assets exceeding its liabilities may be unable to pay its debts when they are due. Why might this occur?

Answer:

A company that has balance sheet assets exceeding liabilities but is unable to sell those assets in order to settle debts when due is at risk of insolvency. One definition of an insolvent company is one that is unable to pay its debts when they fall due for payment.

It is not uncommon for companies to hold physical stock that cannot be sold to raise cash to pay debts. Other types of illiquid assets are investment in subsidiaries and tax losses carried forward.

Also, the forced sale of assets within a short time can reduce the amount for which they can be sold. An asset with value exceeding the balance sheet liabilities, may need to be sold in a hurry for a lesser amount, and the proceeds can be less than the value of liabilities.



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