Financial Risk Management

3rd Edition (Enhanced)

Corrections

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Item 1

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Module 2

Figure 2.1 Cash and Operating Cycles for a Company, page 66

- There is a word missing from the text associated with the second to last arrow in the diagram. It should read 'Cash conversion cycle' rather than 'Cash cycle'.

Item 2

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Module 2

Example 2.6 Price of a Coupon-Paying Bond, page 78 (eBook and .pdf versions only)

- In the .pdf version of the Study Guide, the example for the market price of a bond with coupons paid semi-annually incorrectly shows number of periods as 4 (1 + 0.03)4. It should be 8 periods (1 + 0.03)8. Please note that the resulting calculations are correct.

Replace

$$P_0 = \left(\frac{4000}{0.03}\right)\left(1 - \frac{1}{(1 + 0.03)4}\right) + \frac{100\,000}{(1 + 0.03)4}$$

With

$$P_0 = \left(\frac{4000}{0.03}\right)\left(1 - \frac{1}{(1 + 0.03)8}\right) + \frac{100\,000}{(1 + 0.03)8}$$

Item 3

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Module 3

Example 3.3 Evaluating capital budgeting techniques (Internal rate of return), page 124

- The result of the calculation with the discount rate at 19 per cent should be **+ $11 527** rather than - $11 527.

Item 4

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Module 3

Example 3.10 Bias when inflation is not consistently treated in the cash flows and discount rate, page 137

- There is an error in the layout of the formulas given in the Study Guide and one formula is missing.

  Please replace the example in the Study Guide with the example below:

Example 3.10: Bias when inflation is not consistently treated in the cash flows and discount rate

A project's cash flows are shown in Table A. Assume that after-tax cash flows have been estimated in **real** terms and that the required **nominal** discount rate is 12 per cent. Also assume that the inflation rate is expected to be 6 per cent per annum.

Table A; Real after-tax cash flows

End of year	Project cost $	Real after-tax cash flow $
0	(100 000)	
1		20 000
2		27 000
3		30 000
4		34 000
5		20 000

Using the nominal discount rate of 12 per cent, the NPV is calculated as follows:

$NPV = –100\ 000 + 20\ 000 / (1.12)^1 + 27\ 000 / (1.12)^2 + 30\ 000 / (1.12)^3 + 34\ 000 / (1.12)^4 + 20\ 000 / (1.12)^5$

NPV = –$6309

Based on this analysis, the project would be rejected. However, this is incorrect because the analysis applies a nominal discount rate to cash flows, which are measured in real terms.

The correct procedure would be to convert the real after-tax cash flows into nominal terms using the expected inflation rate. In this example, the expected inflation rate is 6 per cent per annum.

The real after-tax cash flows would be converted to nominal cash flows as shown in Table B. This table shows that the nominal after tax cash flows are obtained by adjusting the real after-tax cash flows from Table A by the expected inflation rate of 6 per cent; that is, 21 200 = 20 000$(1.06)^1$, 30 337 = 27 000$(1.06)^2$, and so on.

Table B: Real and nominal after-tax cash flows

End of year	Real after-tax cash flow $	Nominal after-tax cashflow $
1	20 000	21 200
2	27 000	30 337
3	30 000	35 730
4	34 000	42 924
5	20 000	26 765

Using the 12 per cent nominal discount rate, the correct NPV is:

$NPV = -100\,000 + 21\,200 / (1.12)^1 + 30\,337 / (1.12)^2 + 35\,730 / (1.12)^3 + 42\,924 / (1.12)^4$

$+ 26\,765 / (1.12)^5$

NPV = $11 011

The correct NPV is positive and so the project should be accepted. The consistent treatment of the effects of inflation has resulted in correctly accepting a project that would otherwise have been incorrectly rejected.

Note that rather than making the investment decision using the nominal cash flows, the real cash flows (shown in Table A) could have been discounted at the real discount rate. The NPV using this method would be the same as the correct NPV previously calculated.

Based on the expected inflation rate of 6 per cent, the corresponding real discount rate is (1.12 / 1.06) - 1 = 5.66 per cent per annum.

Discounting the real cash flows at the real discount rate of 5.66 per cent gives the following NPV:

$NPV = -100\,000 + 20\,000 / (1.0566)^1 + 27\,000 / (1.0566)^2 + 30\,000 / (1.0566)^3$

$+ 34\,000 / (1.0566)^4 + 20\,000 / (1.0566)^5$

NPV = $11 011

As expected, this is the same as the NPV obtained using the nominal cash flows with the nominal discount rate. The key implication of this analysis is that when discounting nominal cash flows, the nominal discount rate should be used, and when discounting real cash flows the real discount rate should be used.

Item 5

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Module 3

Effective interest rates, pages 146-147

- The formula to calculate an effective annual interest rate is incorrect:

Replace: $r_e = \left(\frac{1+r}{m}\right)^m - 1$ With: $r_e = (1 + r / m)^m - 1$

Item 6

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Suggested Answers

Question A3.2

- There is an error in the formula. The amount of $24 000 should be divided by 0.083 which is the effective interest rate and not 0.08. Please note that the resulting answer is correct.
- The correct calculation should be $(24\ 000 / 0.083) * ((1 + 0.083)^5 – 1) = \$141\ 643$

Item 7

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Module 4

Figure 4.4 Inter Continental Exchange (ICE) Sugar No. 11 Futures, page 159

- The final paragraph on this page asks the reader to note 'the falling prices of sugar futures'. The note is referring to Figure 4.4 and should instead read 'the falling prices of sugar futures in the two months to May-2018'.

Item 8

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Module 4

Options, page 166

- In the second dot point on page 166 ('Long put') the text states that 'the pay-off is $5'. This should read 'the pay-off is -$5'.

Item 9

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Module 5

Case Study 5.2, pages 186-187

- In the final table in the case study the word 'impact' should instead be 'gap' as shown below:

GFC Ltd will benefit from:	Under 1 year	1 year and above
(a) Normal yield curve	Negative gap	Positive gap
(b) Inverse yield curve	Positive gap	Negative gap

Item 10

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Module 5

Example 5.6 Hedging with interest rate caps, page 201

- Replace:

  This example ignores the premium that would be charged on a cap. However, the premium would reduce the pay-off from the long cap and add to the effective borrowing rate. Assuming a CP of 0.10 per cent, the effective borrowing rates would be as follows:

  - Where BBSW < Cap, the cap would lapse unexercised, the pay-off from the long cap would be –0.10 per cent and the effective borrowing rate would be 4.60 per cent (i.e. 4.50% + 0.10%).
  - Where BBSW = Cap, the cap may or may not be exercised. Either way, the pay-off from the long cap would be –0.10 per cent and the effective borrowing rate would be 5.10 per cent (i.e. 5.00% + 0.10%).
  - Where BBSW > Cap, the cap would be exercised, the pay-off from the long cap would be 0.40 per cent (i.e. 0.50% – 0.10%) and the effective borrowing rate would be 5.10 per cent (i.e. 5.00% + 0.10%).

- With:

  This example ignores the premium that would be charged on a cap. However, the premium would reduce the pay-off from the long cap (to give the resulting profit from the long cap) and add to the effective borrowing rate. Assuming a CP of 0.10 per cent, the effective borrowing rates would be as follows:

  - Where BBSW < Cap, the cap would lapse unexercised, the profit from the long cap would be –0.10 per cent and the effective borrowing rate would be 4.60 per cent (i.e. 4.50% + 0.10%).
  - Where BBSW = Cap, the cap may or may not be exercised. Either way, the profit from the long cap would be –0.10 per cent and the effective borrowing rate would be 5.10 per cent (i.e. 5.00% + 0.10%).
  - Where BBSW > Cap, the cap would be exercised, the profit from the long cap would be 0.40 per cent (i.e. 0.50% – 0.10%) and the effective borrowing rate would be 5.10 per cent (i.e. 5.00% + 0.10%).

Item 11

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Module 5

Example 5.10, page 209

- The formula for d1 should be:

$$d_1 = \frac{\mathrm{Ln}\left(\frac{f}{x}\right) + \left(\frac{\sigma^2}{2}\right)t}{\sigma\sqrt{t}}$$

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