**Advanced Long-term Asset Analysis Worksheet**

**Answer Keys**

**Consolidation at Simpson**

1.

Purchase price 650,000

Less: Appraised value 505,000 (559,000 – 54,000)

Goodwill 145,000

January 25, 2018 Marketable securities 15,000

 Accounts receivable 250,000

 Inventory 280,000

 Land 170,000

 Factory 180,000

 Machinery 160,000

 Goodwill 145,000

 Accounts payable 100,000

 Line of credit 250,000

 Mortgage payable 200,000

 Cash 650,000

**Consolidation at Dexter**

1. **Full goodwill**

Fair value of subsidiary 875,000 (787,500 / 0.90)

Less: Fair value of net identifiable assets 710,466 (734,466 – 24,000)

Goodwill 164,534

Minority interest 87,500 (875,000 x 0.10)

January 25, 2018 Accounts receivable 125,466

 Inventory 240,000

 Land 280,000

 Building 570,000

 Equipment 580,000

 Goodwill 164,534

 Accounts payable 25,000

 Notes payable 330,000

 Loan payable 730,000

 Minority interest 87,500

 Cash 787,500

Note: The minority interest includes their share of the fair value of the net identifiable assets plus the goodwill relating to that share.

1. **Partial goodwill**

Acquisition price 787,500

Less: Fair value of the share of net identifiable assets 639,419 (734,466 – 24,000) x 0.90

Goodwill 148,081

Minority interest 71,047 (710,466 x 0.10)

January 25, 2018 Accounts receivable 125,466

 Inventory 240,000

 Land 280,000

 Building 570,000

 Equipment 580,000

 Goodwill 148,081

 Accounts payable 25,000

 Notes payable 330,000

 Loan payable 730,000

 Minority interest 71,047

 Cash 787,500

Note: The minority interest includes their share of the fair value of the net identifiable assets, but not the goodwill relating to that share.

**Equity Method at Western Realty**

1.

|  |  |
| --- | --- |
| Price | 720,000 |
| Carrying amount | 600,000 |
|  | 120,000 |
|  |
| Depreciable assets (.25) (60,000) | (15,000) |
| Land (.25) (300,000) | 75,000 |
| Goodwill | 60,000 |
|  | 120,000 |

 January 1 Investment in associates – K 720,000

 Cash 720,000

 December 31 Investment in associates – K1 135,000

 Investment income – K 135,000

 1(540,000) (.25) = 135,000

 December 31 Cash1 90,000

 Investment in associates – K 90,000

 1(360,000) (.25) = 90,000

 December 31 Investment in associates – K1 1,500

 Investment income – K 1,500

 1(15,000) / 10 = 1,500

2.

720,000 + 135,000 – 90,000 + 1,500 = 766,500

**Equity Method at Diversified**

1.

|  |  |
| --- | --- |
| Price | 1,410,000 |
| Carrying amount (.20) (1,000,000 + 1,750,000 + 2,350,000) | 1,020,000 |
|  | 390,000 |
|  |
| Land (.20) (550,000) | 110,000 |
| Depreciable assets (.20) (450,000) | 90,000 |
| Goodwill | 190,000 |
|  | 390,000 |

 June 30, 2017 Investment in associates – Z 1,410,000

 Cash 1,410,000

 December 31, 2017 Investment in associates – Z1 63,000

 Investment income – Z 63,000

 1(315,000) (.20) = 63,000

 December 31, 2017 Cash1 20,000

 Investment in associates - Z 20,000

 1(20,000) (1.00) = 20,000

 Note: Diversified Company did not own the business for the first six months of the year, so only 20.0% of the net income for the second six months of the year should be added to the investment. The full dividend should be subtracted because Diversified would have had to pay the previous owner for the six months' dividends they earned but did not receive. This amount would have been included in the purchase price.

 December 31, 2017 Investment income – Z1  3,750

 Investment in associates – Z 3,750

 1(90,000 / 12) (.5) = 3,750

 December 31, 2018 Investment income – Z1  18,000

 Investment in associates – Z 18,000

 1(-90,000) (.2) = -18,000

 December 31, 2018 Cash1 40,000

 Investment in associates – Z 40,000

 1(20,000) (2.00) = 40,000

December 31, 2018 Investment income – Z1  7,500

 Investment in associates – Z 7,500

 1(90,000 / 12) = 7,500

December 31, 2018 Loss on investment impairment – Z1 483,750

 Investment in affiliates – Z 483,750

11,410,000 + 63,000 – 20,000 – 3,750 – 18,000 – 40,000 – 7,500 = 1,383,750

1,383,750 / 20,000 = 69.1875

(20,000) (45 - 69.1875) = -483,750

January 2, 2019 Cash1 705,000

 Investment in affiliates – Z2 675,000

 Gain on sale of investment in affiliate – Z3 30,000

 1(15,000) (47)

 2(15,000) (45)

 3(15,000) (47 – 45)

January 2, 2019 Financial assets – Z1 225,000

 Investment in affiliates – Z 225,000

 15,000 (45)

**Note:** Ownership has fallen to 5.0%, so the investment is now a financial asset accounted for using the FVOCI method.

**Upstream and Downstream Transactions at Rapport**

1.

Rappaport sales to Ruthgart

(160,000 – 96,000) x ((160,000 – 120,000)/160,000) = 16,000

Note: This profit should not be recognized until the products are sold to the external customer next year.

Ruthgart sales to Rappaport

(58,000 – 50,000) = 8,000

Note: This profit should not be recognized until the products are sold to the external customer next year.

2.

Rappaport and Ruthgart should recognize the 16,000 and 8,000 in net income from last year.

**Joint Control at Halston**

**1.**

**Arrangement 1**

Halston and its four other partners all have joint control as they must unanimously approve all decisions. The investment is a joint venture as a separate legal entity is established, and each party has the right to their share of the new entity’s profits and net assets. All parties account for the investment using the equity method.

**Arrangement 2**

Halston and Company B have joint control as both parties must approve all decisions, and they have 80% of the voting rights, which is more than the 75% required. The investment is a joint venture as a separate legal entity is established, and each party has the right to their share of the new entity’s profits and net assets. Halston and Company B account for the investment using the equity method. Company C accounts for the investment as a financial asset using the FVPL or FVOCI methods.

**Arrangement 3**

Halston and either Company B or C have joint control as both parties must approve all decisions, and they have 75% of the voting rights, which equals the 75% required. The investment is a joint venture as a separate legal entity is established, and each party has the right to their share of the new entity’s profits and net assets. Halston and Company B or C account for the investment using the equity method if one of the voting combinations is designated in the contractual agreement. The other company accounts for the investment as a financial asset using the FVPL or FVOCI methods.

**Arrangement 4**

Halston and the other company owning 30% of the voting rights have joint control as both parties must approve all decisions, and they have 60% of the voting rights, which is more than the 50% required. The investment is a joint venture as a separate legal entity is established, and each party has the right to their share of the new entity’s profits and net assets. The investment is accounted for using the equity method. The other company accounts for the investment as a financial asset using the FVPL or FVOCI methods.

**Arrangement 5**

Halston and the other company owning 30% of the voting rights do not have joint control, as they need 75% of the voting rights to make decisions, and the remaining 40% of the voting rights are widely disbursed. All companies would account for the investment as a financial asset using the FVPL or FVOCI.

**Arrangement 6**

Halston has control and should account for the investment using the consolidation approach. The other company should account for the investment as a financial asset using the FVPL or FVOCI methods.

**Cost Model at Wilbur and Jenkins**

**Case 1**

1.

565,000 – 490,000 = 75,000

 75,000 – 40,000 = 35,000

 Land: (35,000) ($\frac{350,000}{350,000+175,000}$) = 23,333.33

Building: (35,000) ($\frac{175,000}{350,000+175,000}$) = 11,666.67

December 31, 2010 Impairment loss – Goodwill 40,000.00

 Impairment loss – Land 23,333.33

 Impairment loss – Building 11,666.67

 Goodwill 40,000.00

 Land 23,333.33

 Accumulative depreciation – Building 11,666.67

2.

 515,000 – 490,000 = 25,000

 Land: 350,000 – 23,333.33 = 326,666.67

 Building: 175,000 – 11,666.67 = 163,333.33

 Land: (25,000) ($\frac{326,666.67}{326,666.67+163,333.33}$) = 16,666.67

 Building: (25,000) ($\frac{163,333.33}{326,666.67+163,333.33}$) = 8,333.33

 Land: 326,666.67 + 16,666.67 = 343,333.34 (Not above original carrying value of 350,000)

 Building: 163,333.33 + 8,333.33 = 171,666.66 (Not above original carrying value of 175,000)

 December 31, 2011 Land 16,666.67

 Accumulative depreciation – Building 8,333.33

 Impairment loss reversal – Land 16,666.67

 Impairment loss reversal – Building 8,333.33

 **What if the recoverable value was $610,000?**

 610,000 – 490,000 = 120,000

Land: (120,000) ($\frac{326,666.67}{326,666.67+163,333.33}$) = 80,000

 Building: (120,000) ($\frac{163,333.33}{326,666.67+163,333.33}$) = 40,000

 Land: 326,666.67 + 80,000 = 406,666.67 (Above original carrying value of 350,000)

 Building: 163,333.33 + 40,000 = 203,333.33 (Above original carrying value of 175,000)

 Land: 350,000 - 326,666.67 = 23,333.33

 Building: 175,000 – 163,333.33 = 11,666.67

December 31, 2011 Land 23,333.33

 Accumulative depreciation – Building 11,666.67

 Impairment loss reversal – Land 23,333.33

 Impairment loss reversal – Building 11,666.67

 Note: Assets can only be written up to their original carrying value.

**Case 2**

1.

600,000 – 510,000 = 90,000

 90,000 – 35,000 = 55,000

 Building: (55,000) ($\frac{200,000}{200,000+50,000}$) = 44,000

Equipment: (55,000) ($\frac{50,000}{200,000+50,000}$) = 11,000

December 31, 2010 Impairment loss – Goodwill 35,000

 Impairment loss – Building 44,000

 Impairment loss – Equipment 11,000

 Goodwill 35,000

 Accumulative depreciation - Building 44,000

 Accumulative depreciation – Equipment 11,000

Note: The fair value of land is known, and it is above its current carrying value, so the land should not be written down. The remaining building and equipment assets for which a fair value cannot be determined should be written down only after eliminating all goodwill.

**Cost Model at Delta Mining**

1.

**Book value**

15,000,000 – 1(995,000) (5) – 2(300,000) (5) – 3(200,000) (5) = 7,525,000

1 ((10,000,000 – 50,000) / 10,000,000) (1,000,000) = 995,000

2 (3,000,000 / 10,000,000) (1,000,000) = 300,000

3 (2,000,000 / 10,000,000) (1,000,000) = 200,000

**Estimated Cash Flows**

(1,000,000) (1.75) – (1,000,000) (.50) – (.50) (.50) (1,000,000) = 1,000,000

**Present Value of Cash Flows**

1,000,000 ($\frac{1-(1+.10)^{-5}}{.10}$) + $\frac{50,000}{(1+.10)^{5}}$ = 3,821,833

**Impairment**

7,525,000 – 3,821,833 = 3,703,167

3,703,167 – 250,000 = 3,453,167

Land 10,000,000 – (995,000) (5) = 5,025,000

Building 3,000,000 – (300,000) (5) = 1,500,000

Equipment 2,000,000 – (200,000) (5) = 1,000,000

5,025,000 + 1,500,000 + 1,000,000 = 7,525,000

Land ($\frac{5,025,000}{7,525,000}$) (3,453,167) = 2,305,935

Building ($\frac{1,500,000}{7,525,000}$) (3,453,167) = 688,339

Equipment ($\frac{1,000,000}{7,525,000}$) (3,453,167) = 458,893

December 31, 2018 Impairment loss 3,703,167

 Accumulative depreciation – Land 2,305,935

 Accumulative depreciation – Building 688,339

 Accumulative depreciation – Equipment 458,893

 Goodwill 250,000

**Capitalization of Borrowing Costs at Duluth and Dauphin**

1.

**Duluth Manufacturing**

Interest on the construction loan for eight months was:

(2,000,000) (0.08/12) (8) = 106,666.67

Interest earned on the unused portion of the construction loan for eight months was:

19,000.02

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Expenditures** | **Accumulative Expenditures** | **Unused Loan** | **Interest on Unused Loan (0.04/12)** |
| March 1 | 300,000 | 300,000 | 1,700,000 |  5,666.67  |
| April 1 | 300,000 | 600,000 | 1,400,000 |  4,666.67  |
| May 1 | 300,000 | 900,000 | 1,100,000 |  3,666.67  |
| June 1 | 300,000 | 1,200,000 | 800,000 |  2,666.67  |
| July 1 | 300,000 | 1,500,000 | 500,000 |  1,666.67  |
| August 1 | 300,000 | 1,800,000 | 200,000 |  666.67  |
| September 1 | 300,000 | 2,100,000 | 0 |  -  |
| October 1 | 300,000 | 2,400,000 | 0 |  -  |
|  |   |   |   |  19,000.02  |

Interest that can be capitalized is: 106,667.67 – 19,000.02 = 87,667.65

**Dauphin Industries**

The capitalization rate is:

(7.30%) (5,000,000 / (5,000,000 + 10,000,000)) + (9.10%) (10,000,000 / 5,000,000 + 10,000,000) = 8.5%

Weighted average expenditures are:

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Expenditures** | **Weight** | **Weighted Average Expenditures** |
| February 1 | 500,000 | 10/12 | 416,666.67  |
| March 1 | 500,000 | 9/12 | 375,000.00  |
| April 1 | 500,000 | 8/12 | 333,333.33  |
| May 1 | 500,000 | 7/12 | 291,666.67  |
| June 1 | 500,000 | 6/12 | 250,000.00  |
| July 1 | 500,000 | 5/12 | 208,333.33  |
| August 1 | 500,000 | 4/12 | 166,666.67  |
| September 1 | 500,000 | 3/12 | 125,000.00  |
| October 1 | 500,000 | 2/12 | 83,333.33  |
| November 1 | 500,000 | 1/12 | 41,666.67  |
|   |   |  | 2,291,666.67  |

Interest that can be capitalized is: (2,291,666.67) (0.085) = 194,791.67

**Decommissioning and Restoration Costs**

1.

|  |  |  |
| --- | --- | --- |
| January 1, 2018 | Mine Property | 193,611,664 |
|  |  Cash | 180,000,000 |
|  |  Restoration cost provision | 13,611,664 |

1 180,000,000 + 20,000,000 / (1 + .08)5 = 193,611,664

|  |  |  |
| --- | --- | --- |
| December 31, 2018 | Depreciation Expense1 | 38,722,333 |
|  |  Accumulative depletion: Mine Property |  38,722,333 |

1 193,611,664 / 5 = 38,722,333

|  |  |  |
| --- | --- | --- |
| December 31, 2019 | Depreciation Expense | 38,722,333 |
|  |  Accumulative depletion: Mine Property |  38,722,333 |

**Note:** Straight-line amortization was used because production at the mine will occur uniformly over the five years. If production was not uniform, a units-of-output method should be used.

|  |  |  |
| --- | --- | --- |
| December 31, 2018 | Interest expense | 1,088,933 |
|  |  Restoration cost provision | 1,088,933 |

|  |  |  |
| --- | --- | --- |
| December 31, 2019 | Interest expense | 1,176,048 |
|  |  Restoration cost provision | 1,176,048 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Period** | **Beginning Balance** | **Interest (.08)** | **Ending Balance** |
| 2018 | 13,611,664 | 1,088,933 | 14,700,597 |
| 2019 | 14,700,597 | 1,176,048 | 15,876,645 |

2.

Delta may have intentionally underestimated its decommissioning and restoration costs and overestimated its discount rate to reduce depreciation and interest expense in 2018 and 2019.

**Balance Sheet Quality Issues**

1. Taka does not control any associated companies, so it accounts for them using the equity method instead of consolidation. This increases the company’s operating profit margin and reduces its debt ratio. An analyst should consolidate these associated companies despite the level of ownership to prevent this manipulation.
2. Ella is attempting to increase its current ratio by selling its receivables early and using the proceeds to partially pay down its current liabilities. As long as its current ratio is initially above 1.0, the current ratio will rise. These actions are negated as Ella controls the financing unit and must consolidate its operations according to IFRS, even with less than 50.0% ownership.
3. FIFO gives a lower cost of sales (i.e. higher gross profit) and a higher inventory valuation than the average cost method because older units are expensed first, and ending inventory consists of recent inventory purchases. An analyst may convert the financial statements to the average cost method, so some financial ratios are more comparable with competitors, but inventory is more accurately valued using FIFO.
4. Gaylord can only recognize goodwill in an acquisition and cannot develop it internally. The value of internally developed intangible assets is often understated or excluded entirely from the balance sheet because the development costs were difficult to trace to the asset, conditions for capitalizing costs were not met when the initial expenditures were made, and revaluation gains cannot be recognized unless there is an active secondary market. An analyst should reassess intangible assets at their fair value regardless of whether there is an active market. Goodwill may also be estimated and recognized on the balance sheet.
5. Simpson’s investments are classified as current or long-term depending on when they mature, or if the company plans to sell them over the next 12 months. These investments may have been reclassified as short-term investments to increase the current ratio to meet a bank loan requirement. An analyst may exclude these assets when calculating the current ratio to prevent this manipulation. Financial institutions often have specific rules about what can be included when calculating the current ratio.
6. Wilson claims it reclassified some of its receivables as long-term because of collection problems. It may be trying to improve its accounts receivable turnover in days, which is calculated using short-term receivables only. An analyst may instead classify these receivables as short-term to prevent this manipulation.
7. Howard’s deferred income tax asset is probably overvalued given the company’s financial prospects. An analyst should record an impairment if the likelihood of the asset being realized is less than probable.
8. Hanson is reducing its annual pension expense and defined pension plan liability by lowering its actuarial estimate for the rate of compensation increase. An analyst should be wary of companies that frequently change a plan’s actuarial assumptions and may decide to recalculate these amounts using the average rate of compensation increase for the industry in this case.
9. Columbia may be overvaluing these assets since they rely solely on management assessments instead of active market data. An analyst should review these valuations and adjust them if necessary.
10. Hanover may be timing property, plant, and equipment impairments and reversals to meet its profit targets or smooth its earnings. An analyst should eliminate these questionable impairments and value the assets at their actual value by adopting the revaluation model.
11. Global may be over-allocating the price of the acquisitions to goodwill to reduce amortization costs. It may also have overpaid for past acquisitions but failed to record the goodwill impairments. An analyst should examine goodwill for each cash-generating unit and recognize any needed impairments.
12. Emerson’s fixed turnover is likely higher than the industry average because of its older assets. It may also have removed the idle facilities from its fixed assets when calculating the ratio, which other companies may not have done. Higher fixed asset turnover is a positive sign, but the older assets may require additional maintenance and higher labour costs. An analyst should verify this and examine whether Emerson can generate sufficient cash to replace these assets soon.
13. Anton is reducing its accrued liabilities by reassessing the probability of several of its liabilities as less than probable to improve its current ratio. These contingent liabilities still must be noted, so an analyst can review the assessment and accrue them again if appropriate.
14. May has increased the value of its long-term receivables by using a lower discount rate. An analyst should determine if it is reasonable by comparing the rate used to that of its competitors.
15. McDougal can account for its leases as operating by keeping the term under one year. By getting the assets and liabilities relating to these leases off the balance sheet, McDougal can raise its asset turnover ratios, lower its debt ratio, and generate a higher return on assets. An analyst should capitalize the operating leases to make the company’s financial statements comparable to its competitors. This is not required by IFRS, but should be done as the amount is material.

16. It is acceptable for Albertson to capitalize interest costs attributable to the self-construction of assets, subject to the rules in IAS 23 Capitalization of Borrowing Costs. General administration costs and the allowance for normal profit should not be capitalized as they are not legitimately required to put the asset into location and condition for use. Companies often capitalize unrelated costs to increase net income in the current year. Depreciation expenses will be higher in the future, but these costs will be spread over a longer period. An analyst should expense these costs and reduce the value of the factory.

17. Squires’ internally developed intangible assets are likely understated because 1) costs are difficult to trace to specific products, 2) the conditions for capitalizing were not met when the costs were first incurred, and 3) revaluation gains cannot be recognized unless there is an active market for the asset. Also, Squire’s competitors likely purchased more of their new products in the open market, where they typically paid a higher price. If the intangible assets are bought as part of a business acquisition, more of the total acquisition cost may be allocated to the intangible assets to reduce depreciation expense in the current period. An analyst should consider recording these intangible assets at fair value.

18. Wellington is taking a “big bath.” It is allocating more of the cost of the acquisition to subjectively valued assets, including goodwill and several patents. It is then writing off these assets to make future operations appear better due to lower amortization. Analysts tend to ignore these large one-time charges and focus more on the future when judging the success of a company.

19. Clean’s Class B common shares should be classified as debt and not equity since there is a required payment as the company may have to repurchase the shares. The analyst should reclassify the Class B shares as debt to measure Clean’s use of financial leverage more accurately.

1. Premium Brands’ convertible bond issue is “in the money” and will likely be converted into common shares within the year, so there is no required payment. The analyst should record this bond as equity to measure Premium Brands’ use of financial leverage more accurately.
2. R&D should not be capitalized unless a company demonstrates six important factors. These are the project is technically feasible; management intends to sell or use it; management can sell or use it; the project is financially viable given the internal or external market’s size; adequate technical and financial resources exist to complete the project and sell or use it; and expenditures can be accurately traced to the project. Able does not appear to have the technical or financial resources to develop this project further, so the R&D costs should be written off.
3. IFRS prefers that leaders use recent price quotations for comparable companies and hire independent valuators. These will provide a more objective measure of the investment property’s value.
4. Trottier's cash, cash equivalents, and short-term investments appear excessive. Investors should encourage the company to give any surplus cash to them by paying higher dividends, letting them find more profitable investments.
5. Riel’s is controlled by another company, which can affect its financial performance. A parent company may require a subsidiary to sell its products to them at cost to maximize profits; determine where a subsidiary can sell its products or buy its inputs to benefit other subsidiaries; limit a subsidiary’s expansion options in favour of other related companies; and force subsidiaries to hire or give lucrative consulting contracts to family members of a parent company’s executives. Analysts should examine the related party relationship more closely for practices that might affect Riel’s profitability. They may raise concerns at the company’s next meeting with analysts or encourage minority investors to divest.
6. Amstel may be incorrectly applying accounting policies to improve its financial performance. Analysts may raise concerns at the company’s next meeting with analysts or with the Canadian Public Accountability Board, which oversees audit quality in Canada.