**Valuation: Measuring and Managing the Value of Companies**

**Henkel Integrative Case: Part V**

Enterprise Value

**Introduction**

In this assignment, we value Henkel AG on an “as-is” basis using the discounted cash flow method. An “as-is” valuation assumes that forecast ratios remain at their current levels. An “as-is” valuation allows you to focus on building the model instead of forecasting. It also provides a starting point for a reasonable assessment of value. Once the model is built, you can then adjust forecast ratios to better represent how the company is expected to change over time.

**Instructions**

To value Henkel on an “as-is” basis, we proceed in six steps. In Step 1, prepare a set of reorganized financial statements. To assure consistency, the reorganized financial statements should reconcile (i.e. NOPLAT to net income, invested capital to total funds invested). Next, use the reorganized financial statements to calculate free cash flow. Free cash flow equals NOPLAT plus noncash operating expenses less investments in invested capital. We recommend reconciling free cash flow to cash flow available to investors. Similar to the reconciliation process for NOPLAT and invested capital, reconciling cash flows prevents double counting and/or excluding critical cash flows. In Step 4, create forecast ratios for each item in NOPLAT and invested capital. Use these forecast ratios to project future NOPLAT, invested capital, and consequently future free cash flow. In the final step, estimate the value of core operations by discounting free cash flow and continuing value at the weighted average cost of capital. To move from the value of core operations to equity value, add nonoperating assets and deduct debt and debt equivalents. The specifics of the process are as follows:

1. **Prepare Reorganized Financial Statements.** A robust DCF requires three reorganized financial statements: NOPLAT and its reconciliation to net income, invested capital and its reconciliation to total funds invested, and the statement of retained earnings. The three statements will be used to calculate cash flow, as well as move from core operating value to enterprise value and enterprise value to equity value. Assignment 2 reorganized the financial statements for Henkel. If you have not done so already, make sure to reorganize the income statement and balance sheet into operating, nonoperating, and financial items.
2. **Compute Free Cash Flow[[1]](#footnote-1).** Using the reorganized financial statements, calculate free cash flow for the most recent year. Free cash flow is defined as NOPLAT plus depreciation, less investment in working capital, PP&E, intangible assets, and other noncurrent assets (net of noncurrent liabilities). Each “investment” should match a corresponding account in invested capital. To determine net capital expenditures (net of PP&E sales), compute the increase in PP&E plus depreciation. To determine investment in intangibles, compute the increase in acquired intangibles plus amortization.
3. **Reconcile Free Cash Flow to Cash Flow Available to Investors (optional).** To avoid double counting and/or excluding critical cash flows, reconcile free cash flow to cash flow available to investors. As you may discover, this process can be tricky. A small error such as an accidental sign switch will prevent perfect reconciliation.
	1. To reconcile free cash flow, start by adding after-tax nonoperating income and losses (from the reconciliation of NOPLAT to net income). After-tax nonoperating income includes restructuring charges, other nonoperating income, investment results, and interest expense. It does not include amortization, since this is not a cash expense. Next, subtract the increase in nonoperating assets (from the reconciliation of invested capital to total funds invested). The sum of free cash flows and nonoperating income, less increase in nonoperating assets equals cash flow available to investors.
	2. To reconcile cash flow available to investors to sources of cash flow, compute the change in debt, debt equivalents, equity, and equity equivalents (except retained earnings). To this number, add each account (except net income) from the statement of retained earnings to complete sources of cash flow (such as dividends, etc). At this point, you should have two identical calculations of cash flow available to investors.

**Advanced adjustments:** In the cash flow key, we have treated actuarial gains and losses as an offset to nonoperating assets (rather than an equity equivalent). We have also aggregated all deferred taxes as a debt equivalent and netted the minority expense against the change in minority interest.

1. **Build Forecast Ratios[[2]](#footnote-2).** In the next step, compute an appropriate financial ratio for each account in NOPLAT and invested capital (from the operating perspective). These forecast ratios should match your analysis in Assignment 3. Set 2010-2015 forecast ratios equal to the prior year ratio (for instance set 2010 ratio equal 2009, 2011 equal to 2010, etc). Use the following revenue growth rates (as provided by the analyst community):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **2010E** | **2011E** | **2012E** | **2013E** | **2014E** | **2015E** |
| 6.0% | 3.5% | 3.5% | 4.0% | 4.0% | 3.0% |

For this assignment, only calculate five forecast years and one continuing value year.

1. **Forecast Reorganized Financial Statements & Free Cash Flow.** Use the forecast ratios from the previous step to forecast each line item in NOPLAT and invested capital (from the operating perspective). You do not need to forecast the reconciliation items. Your forecast of NOPLAT and invested capital should follow an identical format to that of historical years. By having an identical format, you should be able to copy/paste historical free cash flow forward to the forecast period without issue. This generates your forecast of free cash flow.
2. **Estimate Enterprise Value[[3]](#footnote-3).** In the final step, discount free cash flow and continuing value using the weighted average cost of capital estimated in Assignment 4. To estimate continuing value, apply the key value driver formula using final-year NOPLAT, final-year ROIC without acquired intangibles, WACC computed from Assignment 4, and long-run growth of 2% (as projected by the analyst community). Summing discounted cash flow and discounted continuing value generates the value of operations. To this value, add the market value (as proxied by book value) of nonoperating assets (listed in the reconciliation of total funds investment) to estimate enterprise value. From enterprise value, deduct debt, debt equivalents (pensions, other long-term provisions), and hybrid securities (minority interest). This will generate an estimate of intrinsic equity value.

Congratulations, you are done!

1. Exhibit 7.13 provides a free cash flow calculation for Home Depot. Exhibit 7.13 also reconciles cash flow available to investors. Exhibit 31.24 provides a free cash flow statement for Heineken. [↑](#footnote-ref-1)
2. Exhibit 9.3 demonstrates how to build a forecast ratio and project a financial account. [↑](#footnote-ref-2)
3. Exhibit 6.4 provides an enterprise DCF summary for Home Depot. Continuing value can be found in Exhibit 6.10. [↑](#footnote-ref-3)