The Roadmap to Effective Segment Reporting

At the core of value discovery

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((QUALITÄT ZU SCHLECHT!))

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Current segment reporting does not assist investors in their use of valuation models. Investors would like more segment-level information. These are key findings of the Post-Implementation Review (PIR) of IFRS 8 (2013) and PIR SFAS 131 (2012). They highlight that the development and improvement of segment reporting is long overdue. Although it is a critical cornerstone for forecasting future firm performance and firm value, the current status quo of segment reporting does not enable investors to perform segment analysis with a focus on operating activities, profitability, and growth. In order to address key concerns of the PIR on segment reporting, the IASB proposes the disclosure of additional line items to the segment statements (IFRS 8 Staff Paper, October 2016). The authors appreciate the IASB's initiative to improve segment reporting. At the same time, the authors would like to emphasize that segment reporting from the investors' perspective can only be improved if it aims to identify value drivers, thus sharpening the focus on operations.

Keywords:

- IFRS 8
- SFAS 131
- Post-Implementation Review (PIR)

- IASB Proposals
- Management Approach
- Segment Key data
- Key Value drivers
- External Reporting; Internal Use

1. Introduction

"[Segment data] is vital, essential, fundamental, indispensable, and integral to the investment analysis process. Analysts need to know and understand how the various components of a multifaceted enterprise behave economically. One weak member of the group is analogous to a section of blight on a piece of fruit; it has the potential to spread rot over the entirety. Even in the absence of weakness, different segments will generate dissimilar streams of cash flows to which are attached disparate risks and which bring about unique values. Thus, without disaggregation, there is no sensible way to predict the overall amounts, timing, or risks of a complete enterprise's future cash flows. There is little dispute over the analytic usefulness of disaggregated financial data" (AIMR 1993, 59–60).

The above quote goes back to the 1993 position paper "Financial Reporting in the 1990s and Beyond" of the Association for Investment Management and Research (AIMR), today the CFA Institute. However, in light of the findings (and ongoing related discussion) of the Post-Implementation Review (PIR), the statement above appears shockingly up-to-date even today.

The PIR on IFRS 8 reports that "[m]any participants [of the PIR] think that too much aggregation of operating segments takes place. Investors, in particular, think that segments are aggregated in a way that does not assist them in their use of valuation models" (IASB 2013, PIR 2013, p. 23). Similarly, the PIR on SFAS 131 (ASC 280) finds that "users would like more segment information (e.g., gross margin and cash flow). Users also might like more consistency across companies in the amount, type, and measurement of information disclosed" (PIR 2012, p. 1).

Apparently, even today, **segment reporting only rudimentarily delivers information** that allows investors to assess profitability, growth, and risk for each of the reportable segments, and thus, the intrinsic value of a company as a whole. Indeed, this appears somewhat surprising, as the IASB noted this deficit when it developed IFRS 8: "[R]ecommendations had been made in each of the last 20 years in evaluations of corporate reporting conducted by the AIMR" (IFRS 8.BC50 (2010)).

The following sections articulate the need to deliver more relevant segment information to enable investors to assess firm value reliably.

Even today, segment reporting only rudimentarily delivers information that allows investors to assess profitability, growth, and risk for each of the reportable segments, and thus, the intrinsic value of a company as a whole.

2. Background on IFRS 8 and SFAS 131

The **key terms** are defined as follows:

Operating segment (IFRS 8.5 ff., SFAS 131.10 ff.): Under IFRS, an operating segment is a component of an entity that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available.

For a matrix form of management, SFAS 131.15 requires that products and services constitute the operating segment, while IFRS 8 sticks to the core principle of the "management approach."

Reportable segment (IFRS 8.10 ff., SFAS 131.16 ff.): A reportable segment is an identified or aggregated operating segment that has exceeded the quantitative thresholds defined in the respective standard.

Chief operating decision-maker: The term "chief operating decision-maker" identifies a function, not necessarily a manager with a specific title. The function is to allocate resources to and assess the performance of the operating segments of an entity (IFRS 8.7, SFAS 131.12).

Both IFRS 8 and SFAS 131 require the disclosure of information related to "operating segments" in order to provide **detailed information on the main business activities** of a firm.[1] The core underlying principle for determining the operating segments of a firm is the so-called "**management approach**" (IFRS 8.BC4, SFAS 131.4).[2] The management approach in principle aims to enable investors and other users of financial statements to see the business through the eyes of management (the "chief operating decision-maker"). Or, as stated by the FASB standard, the management approach should allow "users of financial statements [to]:

a. Better understand the enterprise's performance,

b. Better assess its prospects for future net cash flows main activities [, and]

c. Make more informed judgments about the enterprise as a whole" (SFAS 131.3).

According to IFRS 8 as well as SFAS 131, additional operating segments must be reported until at least 75 per cent of the company's revenue is included in reportable segments. This implies that **in some cases up to 25 per cent of a company's revenue may remain unexplained** and not allocated to an operating segment (business activity), notwithstanding the possibility that some reporting segments disclose already aggregated business ac-tivity figures (IFRS 8.12, SFAS 131.17).

3. Available Segment Data for Valuation

Assessing the intrinsic value of a company is at the heart of investing. Splitting financial reporting by the **value drivers** sharpens the lens of the investor on the business activities of a company. Value driver-oriented disaggregation of consolidated financial statements with the purpose of informing the investor about individual core business activities – the segments – is critical to financial analysis and valuation.

This is supported by academic research; for example, *Blanco, García Lara* and *Tribo* (2014, 2015) find a positive relationship between earnings quality and segment disclosure and a negative relation between segment disclosure and cost of capital.[3] *Chen* and *Zhang* (2003) show that segment disclosure is associated with a reduction in information asymmetry and agency costs and that the value relevance of segment reporting is greater should segments exhibit different growth opportunities.[4]

Indeed, the issuance of IFRS 8 (and its US role model SFAS 131) was a huge step forward in developing modern segment disclosure for IFRS users. The stated goal (harmonized between IFRS 8 and SFAS 131.3) of disclosing information that enables "users of [...] financial statements to evaluate the nature and financial effects of the business activities in which it engages and the economic environments in which it operates" is a significant achievement.

Nevertheless, the disclosure requirements of IFRS 8 and SFAS 131 are still very limited. Essentially, segment reporting requires companies to report revenue (from external customers and internal sources), interest expense, interest income, material items of income and expense, profit or loss of associates (equity method), income tax expense or income, total assets, total liabilities (only IFRS), depreciation, amortization, material non-cash items, capital expenditure, and some other investments on segment level (IFRS 8.23,.24, SFAS 131.27,.28).

The disclosure requirements of IFRS 8 and SFAS 131 are still very limited; an all-important breakdown of assets is missing.

However, **an all-important breakdown of assets is missing**. Without the ability to identify core operating assets and separate them from (net) financial assets, financial statement analysis based on asset turnover and profit margin ratios (the

1 IFRS 8 converged with SFAS 131 (now ASC 280).

2 As opposed to the "risks and rewards" approach under the predecessor standard of the IASB, IAS 14.

3 See *Blanco/García Lara/Tribó*, The relation between segment disclosure and earnings quality. Journal of Accounting and Public Policy, 33(5), 2014, 449–469. *Blanco/García Lara/Tribó*, Segment Disclosure and Cost of Capital. Journal of Business Finance & Accounting, 42(3) & (4), 2015, 367–411.

4 See *Chen/Zhang*, Heterogeneous investment opportunities in multiple-segment firms and the incremental value relevance of segment accounting data. Accounting Review, 78(2), 2003, 397–428.

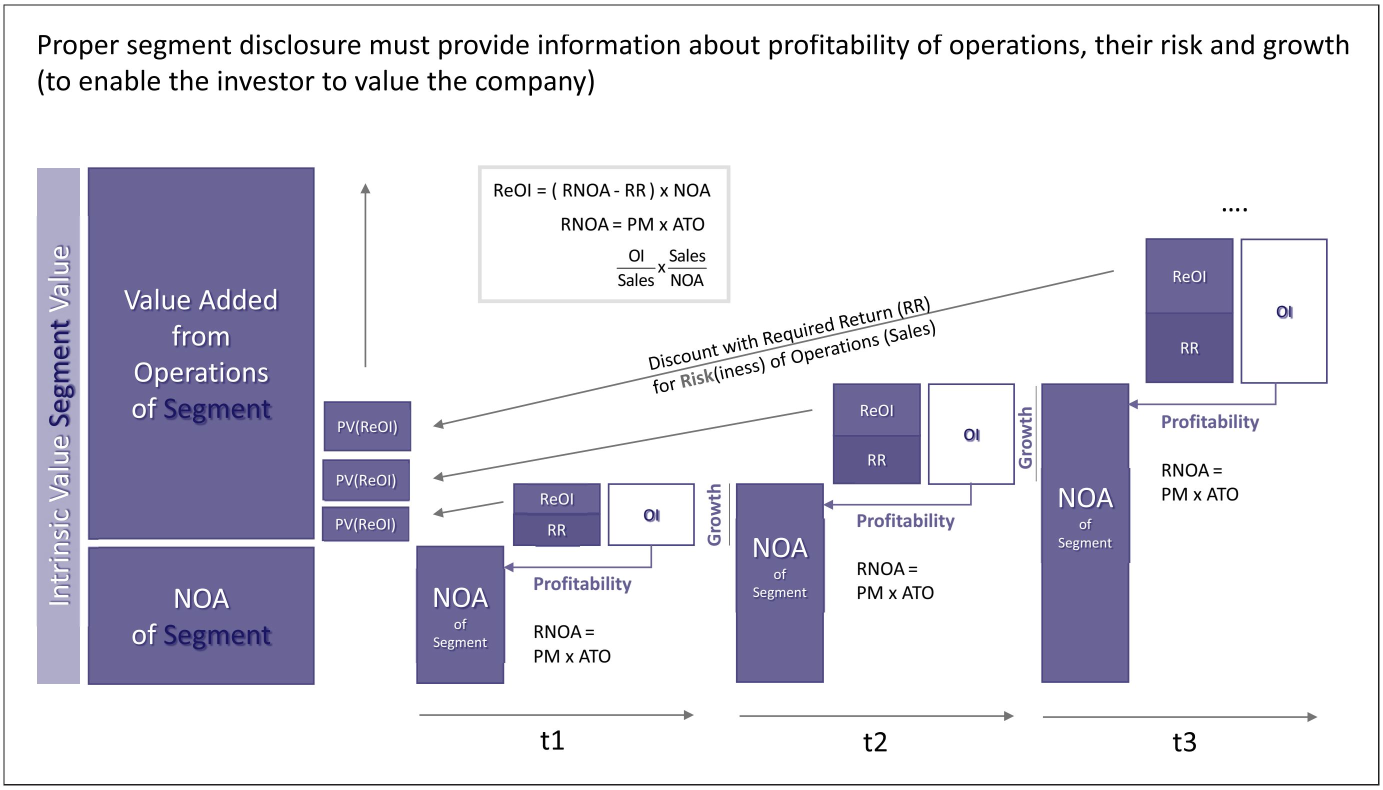

Figure 1: Valuation Framework

key ratios for simple DuPont analysis) is not feasible. Critical items such as leasing liabilities or financial liabilities, goodwill, or items that could be considered either operating or financing (e.g., leasing activities of a car manufacturer who enters in credit sales) are not readily identifiable by the end user of financial statements. This is also the case for internal costs, which are not disclosed (in contrast to its counterpart: internal revenue).

Consequently, an assessment of segment-level information regarding core operating profitability, core operating growth, and the need for future investments in the core operating capacity is not readily accessible. Moreover, profitability analysis and risk assessment is critically hindered by **missing key segment data**.

4. Necessary Segment Data for Valuation

A company's operations comprise its key value drivers. Identifying and quantifying the company's value of operations is therefore the foundation of any valuation exercise.

Value is determined by the drivers of future payoffs, discounted for the risk of operations as depicted in Figure 1 and 2. These drivers can be identified through profitability and growth analysis taking into account the company's risk from operations. Profitability analysis can be broken down into the subsequent analysis of its main drivers Profit Margin (PM) and Asset Turnover (ATO).

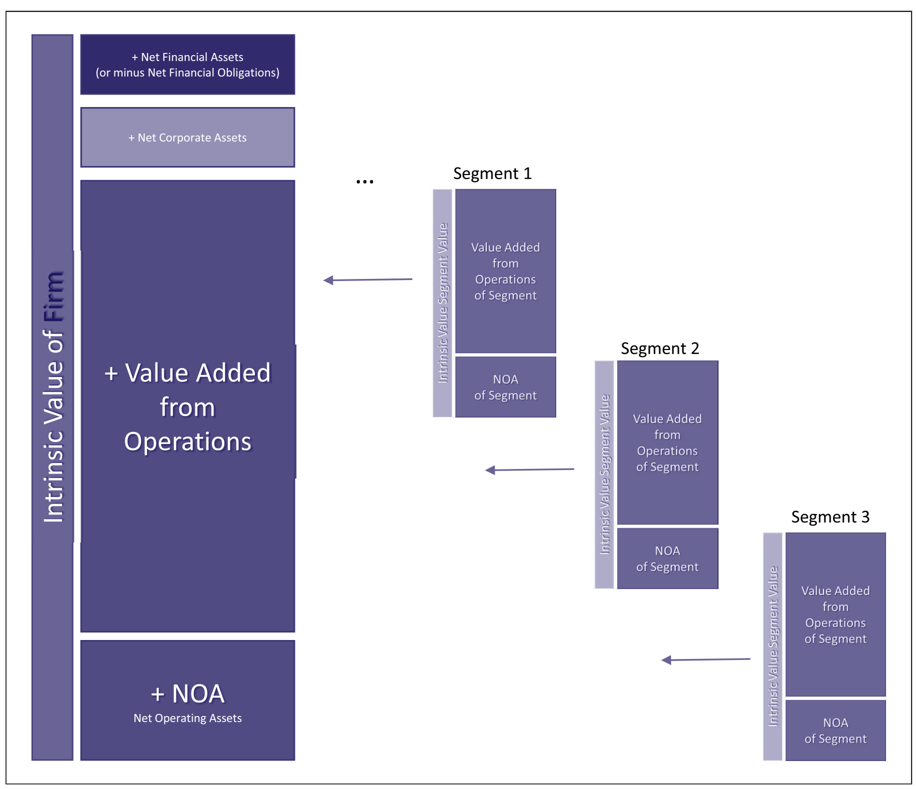

Figure 2: Valuation Framework

Growth analysis usually focuses on the growth of sales.

Our approach consists of **identifying each segment's intrinsic** value by focusing on the company's core value drivers – its operations. For the time being, we do not touch upon the company's financial assets and liabilities, assuming that – except in times of market bubbles – they are reliably and fairly priced by "marking them to market" (which relieves us from forecasting their profitability and growth).[5]

Intrinsic value can be traced back to the current book value of Net Operating Assets (NOA) and the value added as a result of their economic employment within the company's business model. Specifically, the Value Added from Operations represents the sum of current and discounted future streams of Residual Operating Incomes (ReOI) generated by the segment. Residual Operating Income is driven by the spread between how profitable Net Operating Assets are employed (measured by Return on Net Operating Assets) and the Required Return (RR) that inherently results from the segment's line of business and intrinsic risk.

5. Example

The stylized example in Figures 3 to 6 exhibits the idealistic case where the ana-lyst is able to reconcile the overall value of a company to its individual value drivers – its operating segments. There are **four critical elements** that enable this simple yet critical valuation and recon-ciliation exercise:

5.1. Sufficient disclosure for a clear split between Operating and Financial items within the income statement and balance sheet.

The main value drivers of any company are embedded within its operations. The split enables investors to identify those assets and liabilities that are employed in the segment's core business activity. By knowing how much the company invests in each segment, the company's profile and exposure to its constituting revenue streams become transparent in the eyes of the user of the financial statements.

Referring to our hypothetical segment disclosure statement in Figure 3, the investor can clearly observe that Segment 1 represents the company's major line of business (i.e., is the most asset-intensive), embodying the lion's share of operating assets and liabilities, with Net Operating Assets of 140 vs. 20 allocated to Segment 2. Furthermore, the investor is able to see that Segment 1 also holds Net Financial Obligations of 60, while Segment 2 has no external financing attached. Coupling these balance sheet items with their corresponding income statement figures paves the road to the next point of focus.

5.2. Data for Identification of key profitability indicators.

Profit Margin (PM) and Asset Turnover (ATO) are the basis of a solid profitability (DuPont framework) analysis that enables the investor to see how effectively management performs in running the company's operations. Effective disclosure enables investors not only to benchmark company profitability vs. other investment opportunities, but also to critically assess management's decisions that affect segment- and company-level profitability. The latter constitutes a valuable monitoring tool for current shareholders. Comparing Profit Margin and Asset Turnover for Segment 1 in Figure 4 with Segment 2 in Figure 5 respectively, the investor immediately sees that the more asset-intensive Segment 1 is substantially the least profitable among the two. This begs the question of why management has invested such a substantial share of company resources into the op-

Segment Reporting

Income Statement	Segment 1	Segment 2	*Firm level*
Operating Items:			
Sales	100	50	*150*
Cost of Sales	65	20	*85*
Gross Margin	35	30	*65*
Advertising	10		*10*
Administrative	5	2	*7*
Total Operating Expenses	15	2	*17*
Core Operating Income	20	28	*48*
Tax on operating Income	7	9	*16*
Operating Income(after tax)	13	19	*32*
Financial Items:			
Interest Income	3		*3*
Interest Expense	6		*6*
Net Interest Income	-3	0	*-3*
Tax Benefit of Debt	1		*1*
Net Financial Expense (NFE)	-2	0	*-2*

Balance Sheet	Segment 1	Segment 2	*Firm level*
Operating Items:			
Accounts Receivable	20	20	*40*
Inventory	30	5	*35*
Property Plant and Equipment (PPE)	150	20	*170*
Total Operating Assets	200	45	*245*
Operating Liabilities:			
Accounts Payable	15	15	*30*
Deffered Income Taxes	45	10	*55*
Total Operating Liabilities	60	25	*85*
Net Operating Assets (NOA)	140	20	*160*
Financial Items:			
Short-term Investments	60		*60*
Total Financial Assets	60	0	*60*
Financial Liabilities:			
Long-term Debt	120		*120*
Total Financial Liabilities	120		*120*
Net Financial Obligations (NFO)	-60	0	*-60*
Common Shareholders' Equity (CSE)	80	20	*100*

Figure 3: Segment Reporting: Income Statement and Balance Sheet

[5] See *Penman*, Financial Statement Analysis and Security Valuation, Fifth Edition, New York, 2013, p. 461 f.

erating assets of Segment 1. This finding may challenge management's ability to run the business should a peer benchmark reveal that other companies in the same line of business perform better.

5.3. Increased disclosure granularity in terms of operating items contained in both the balance sheet and income statement.

This allows the analyst to conduct proper forecasting of relevant financial statement items: Operating Income, Gross Margin, Total Operating Expenses, Taxes, Net Operating Assets (Operating Assets – Operating Liabilities), Accounts Receivable, Inventories, and Plant Property and Equipment. This not only increases disclosure, but also aids analysts in conducting more reliable forecasts yielding more accurate valuations and investment recommendations.

In our experimental setting, we are able to split the Profit Margin Ratio into its constituting drivers: Gross Margin Ratio, Selling General and Administrative Expense Ratio, and the segment's allocated Tax Rate and Asset Turnover into Accounts Receivable Turnover, Inventory Turnover, Plant Property and Equipment Turnover, and Other Net Operating Assets Turnover, respectively.

This granular breakdown of our two key profitability indicators introduced in the second point above allows the investor to conduct a more reliable forecast, yielding a more accurate valuation exercise. Furthermore, the investor has the necessary ingredients to conduct a sensitivity analysis and observe the value effects of variable Return on Net Operating Assets (RNOA) forecasts. While our theoretical framework enables us to construct time-variable profitability profiles, for the sake of simplicity, we have kept profitability of the two segments constant over the forecasting period – anchored on derived profitability levels based the disclosed segment reporting figures.

Segment Forecasting and Valuation

Segment 1	*Actual*	*Forecast*	*Forecast*
Key Profitability Indicators	*Year 0*	*Year 1*	*Year 2*
Profit Margin (PM)	13,3%	13,3%	13,3%
Asset Turnover (ATO)	0,7	0,7	0,7
RNOA = PM x ATO	9,5%	9,5%	9,5%
Profit Margin Drivers			
Gross Margin Ratio (GM)	35,0%	35,0%	35,0%
SG&A Ratio (SG&A)	15,0%	15,0%	15,0%
Tax Rate (t)	33,3%	33,3%	33,3%
PM = (GM - SG&A) x (1- t)	13,3%	13,3%	13,3%
Turnover Ratios			
Accounts Receivable	5,0	5,0	5,0
Inventory	3,3	3,3	3,3
PPE	0,7	0,7	0,7
Other NOA	-1,7	-1,7	-1,7
ATO = 1 / Sum of Inverse of Turnover Ratios	0,7	0,7	0,7
Sales Growth			
Specific Growth Rates	3%	3%	3%

Pro Forma Financial Statements

Segment 1	*Actual*	*Forecast*	*Forecast*
Income Statement	*Year 0*	*Year 1*	*Year 2*
Sales	100,0	103,0	106,1
Gross Margin	35,0	36,1	37,1
Total Operating Expenses	15,0	15,5	15,9
Core Operating Income (before Tax)	20,0	20,6	21,2
Taxes	6,7	6,9	7,1
Operating Income	13,3	13,7	14,1
Balance Sheet			
Accounts receivable	20,0	20,6	21,2
Inventory	30,0	30,9	31,8
Property Plant and Equipment	150,0	154,5	159,1
Other NOA	-60,0	-61,8	-63,7
Net Operating Assets (NOA)	140,0	144,2	148,5
Operating Income	13,3	13,7	14,1
Change in NOA		4,2	4,3
Free Cash Flow		9,5	9,8
Return on Net Operating Assets (RNOA)	9,5%	9,5%	9,5%
Residual Operating Income (ReOI)	2,1	2,1	2,2
Growth in ReOI			3,0%
Required Return (RR)	8%		
Present Value of ReOI (Year 0 to Year 2)	6,0		
Continuing Value	43,9		
Present Value of Continuing Value	37,7		
NOA as of Year 0	140,0		
Value of Operations	183,7		
Net Financial Obligations	-60		
Value of Common Equity	123,7		
Shares Outstanding	10		
Value per share from Segment 1	12,4		

Figure 4: Forecasting and Valuation of Segment 1

5.4. Relevance of segment split.

We identify at least two aspects in which a proper split into individual business lines would aid in a valuation exercise.

First, different industries exhibit different, industry-specific risk. We argue that a proper segment split is one that enables the investor to quantify the segment's risk contribution to the overall company-level risk. The risk of a segment (or any firm, for that matter) stems from the nature of its operations. Our example and valuation setting quantifies this risk through the use of a segment-level Required Return (RR). The computation of an adequate Required Return rate relies on a clear identification of the segment's line of business, as different industries have specific, individual betas yielding industry-characteristic Required Returns.

Second, different industries pose different, industry-specific growth opportunities. By having a proper segment split, the investor can better identify growth rates that ultimately yield a more transparent valuation framework.

Ultimately, the IASB and FASB should give more consideration to the investors needs when deciding upon the improvement of current segment reporting standards.

Segment Forecasting and Valuation			
Segment 2	*Actual*	*Forecast*	*Forecast*
Key Profitability Indicators	*Year 0*	*Year 1*	*Year 2*
Profit Margin (PM)	37,3%	37,3%	37,3%
Asset Turnover (ATO)	2,5	2,5	2,5
RNOA = PM x ATO	93,3%	93,3%	93,3%
Profit Margin Drivers			
Gross Margin Ratio (GM)	60,0%	60,0%	60,0%
SG&A Ratio (SG&A)	4,0%	4,0%	4,0%
Tax Rate (t)	33,3%	33,3%	33,3%
PM = (GM - SG&A) x (1- t)	37,3%	37,3%	37,3%
Turnover Ratios			
Accounts receivable	2,5	2,5	2,5
Inventory	10	10	10
PPE	2,5	2,5	2,5
Other NOA/Sales	-2,0	-2,0	-2,0
ATO = 1 / Sum of Inverse of Turnover Ratios	2,5	2,5	2,5
Sales Growth			
Specific Growth Rates	3%	3%	3%

Pro Forma Financial Statements			
Segment 2	*Actual*	*Forecast*	*Forecast*
Income Statement	*Year 0*	*Year 1*	*Year 2*
Sales	50,0	51,5	53,0
Gross Margin	30,0	30,9	31,8
Total Operating Expenses	2,0	2,1	2,1
Core Operating Income (before Tax)	28,0	28,8	29,7
Taxes	9,3	9,6	9,9
Operating Income	18,7	19,2	19,8
Balance Sheet			
Accounts receivable	20,0	20,6	21,2
Inventory	5,0	5,2	5,3
Property Plant and Equipment	20,0	20,6	21,2
Other NOA	-25,0	-25,8	-26,5
Net Operating Assets (NOA)	20,0	20,6	21,2
Operating Income	18,7	19,2	19,8
Change in NOA		0,6	0,6
Free Cash Flow		18,6	19,2
Return on Net Operating Assets (RNOA)	93,3%	93,3%	93,3%
Residual Operating Income (ReOI)	17,1	17,1	17,6
Growth in ReOI			3,0%
Required Return (RR)	8%		
Present Value of ReOI (Year 0 to Year 2)	47,9		
Continuing Value	351,6		
Present Value of Continuing Value	301,4		
NOA as of Year 0	20,0		
Value of Operations	369,4		
Net Financial Obligations	0		
Value of Common Equity	369,4		
Shares Outstanding	10		
Value per share from Segment 2	36,9		

Figure 5: Forecasting and Valuation of Segment 2

6. Discussion

Apart from potential advantages for investors and other users of financial statements, the **alignment of external reporting with the internal use of information reduces cost and time** to prepare segment information. "[T]he segments are evident from the structure of the enterprise's internal organization, and financial statement preparers should be able to provide the required information in a cost-effective and timely manner" (SFAS 131.4).

On the other hand, the sole reliance on management's judgment has the potential to lead to discretionary segment information disclosure, lack of **inter-company comparability**, or the potential disclosure of **sensitive information**. *Botosan* and *Stanford* (2005) find that companies used the more lapse predecessor of SFAS 131 – SFAS 14 – to hide profitable segments in less competitive environments in an effort to signal apparent underperformance.[6]

Theories on adverse segment reporting effects:[7]

Proprietary costs of segment reporting: Revelation of a segment with high abnormal profit levels attracts more competition that will erode abnormal profits.

Agency costs of segment reporting: Revelation of a segment with low abnormal profit levels reveals unresolved agency problems and ultimately leads to increased external monitoring.

However, "[g]enerally, stakeholders believe Statement 131 does not result in disclosing competitively sensitive information. However, it is not clear if this belief results from steps companies take to avoid disclosing sensitive information, or because the information disclosed is less sensitive than anticipated" (PIR SFAS 131, p. 9). This is supported by findings in academic research that suggest only limited support for the proprietary cost motive for non-reporting of segments.

Academic research tends to find a positive relationship between earnings quality and the quantity of segment disclosure; nevertheless the analysis of segment reporting under current accounting standards is frustrating.

However – and even if exhaustive segment reporting would be required – there is some evidence that segment informa-

6 See *Botosan/Stanford*, Managers' motives to withhold segment disclosures and the effect of SFAS No. 131 on analysts' information environment. Accounting Review, 80(3), 2005, 751–771.

7 See *Berger/Hann*, Segment profitability and the proprietary and agency costs of disclosure. Accounting Review, 82(4), 2007, 869–906.

tion might be withheld when its disclosure would be unfavorable.[8]

Despite these concerns, academic research tends to find **a positive relationship between earnings quality and the quantity of segment disclosure**,[9] and furthermore, suggests that segment disclosure is associated with a reduction in information asymmetry and agency costs.[10]

7. Conclusion

Segment reporting intrinsically lies at the core of value discovery, as it provides a split of the company's operations into individual value drivers. An accurate company valuation builds on the assessment of the profitability of each of its individual value drivers. The disclosure of *relevant* segment-level information provides the necessary means of assessing the value contribution of each segment (value driver).

Correspondingly, findings of the PIR on SFAS 131 "Investors and other financial statement users view the segment footnote as very important to their investment decisions. Investors use segment information for a variety of analyses, including understanding business activities, making judgments about the company as a whole, and understanding future growth prospects" (PIR SFAS 131, p. 6).

The analysis of segment reporting under current accounting standards is frustrating. Despite the "management approach" segment information mixes operating with financing activities and important detail information for forecasting and risk assessment is missing. This despite the stated goal that segment reporting should enable investors to take on the perspective of management. But neither the nature of the business activities nor their financial effects are adequately dis-

Segment Forecasting and Valuation			
Firm level	*Actual*	*Forecast*	*Forecast*
Key Profitability Indicators	*Year 0*	*Year 1*	*Year 2*
Profit Margin (PM)	21,3%	21,3%	21,3%
Asset Turnover (ATO)	0,9	0,9	0,9
RNOA = PM x ATO	20,0%	20,0%	20,0%
Profit Margin Drivers			
Gross Margin Ratio (GM)	43,3%	43,3%	43,3%
SG&A Ratio (SG&A)	11,3%	11,3%	11,3%
Tax Rate (t)	33,3%	33,3%	33,3%
PM = (GM - SG&A) x (1- t)	21,3%	21,3%	21,3%
Turnover Ratios			
Accounts receivable	3,8	3,8	3,8
Inventory	4,3	4,3	4,3
PPE	0,9	0,9	0,9
Other NOA/Sales	-1,8	-1,8	-1,8
ATO = 1 / Sum of Inverse of Turnover Ratios	0,9	0,9	0,9
Sales Growth			
Specific Growth Rates	3%	3%	3%

Pro Forma Financial Statements			
Firm level	*Actual*	*Forecast*	*Forecast*
Income Statement	*Year 0*	*Year 1*	*Year 2*
Sales	150,0	154,5	159,1
Gross Margin	65,0	67,0	69,0
Total Operating Expenses	17,0	17,5	18,0
Core Operating Income (before Tax)	48,0	49,4	50,9
Taxes	16,0	16,5	17,0
Operating Income	32,0	33,0	33,9
Balance Sheet			
Accounts receivable	40,0	41,2	42,4
Inventory	35,0	36,1	37,1
Property Plant and Equipment	170,0	175,1	180,4
Other NOA	-85,0	-87,6	-90,2
Net Operating Assets (NOA)	160,0	164,8	169,7
Operating Income	32,0	33,0	33,9
Change in NOA		4,8	4,9
Free Cash Flow		28,2	29,0
Return on Net Operating Assets (RNOA)	20,0%	20,0%	20,0%
Residual Operating Income (ReOI)	19,2	19,2	19,8
Growth in ReOI			3,0%
Required Return (RR)	8%		
Present Value of ReOI (Year 0 to Year 2)	53,9		
Continuing Value	395,5		
Present Value of Continuing Value	339,1		
NOA as of Year 0	160,0		
Value of Operations	553,0		
Net Financial Obligations	-60		
Value of Common Equity	493,0		
Shares Outstanding	10		
Value per share	49,3		
-Segment 1	12,4		
-Segment 2	36,9		

Figure 6: Forecast, Valuation and Reconciliation of Company Level Financial Data

closed under the governing IFRS or US GAAP standards.

This paper aimed to highlight the shortcomings of current segment reporting from the perspective of the investor confronted with the task of identifying (quantifying) the strategic segment-related value of operations.

The mere addition of irrelevant line items is not helpful if segment reporting will still fail to disclose relevant information.

Let's conclude that few, yet value rele-vant ingredients could be the key for put-ting segment reporting at the core of val-ue discovery.

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[8] See *Bugeja/Czernkowski/Moran*, The impact of the management approach on segment reporting. Journal of Business Finance and Accounting, 42(3–4), 2015, 310–366.

[9] See *Blanco/García Lara/Tribó*, The relation between segment disclosure and earnings quality. Journal of Accounting and Public Policy, 33(5), 2014, 449–469.

[10] See *Chen/Zhang*, Heterogeneous investment opportunities in multiple-segment firms and the incremental value relevance of segment accounting data. Accounting Review, 78(2), 2003, 397–428.