

Chp 5. FINANCIAL ANALYSIS AND REPORTING (PART 3)

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FINANCIAL
TIMES

Master in Finance
Ranking 2020



CONTENT

Advanced Valuation Issues

1. Taxes
2. Non-Operating Expenses, One-Time Charges, Reserves, and Provisions
3. Leases, Pensions and Other Obligations (**IFRS 16 updated the topic!**)
4. Capitalized Expenses
5. Inflation
6. Foreign Currency
7. Cannibalization Effects and Impacts on NWC and FCF

Recommended Reading:

Koller, T.; Goedhart, M.; Wessels, D. (2010), *Valuation: Measuring and Managing the Value of Companies*. 5th edition, McKinsey & Company Inc. John Wiley & Sons, Inc.

1

Taxes

FINANCIAL ANALYSIS AND REPORTING

TAXES

The Relevance of Taxes for Earnings, Cash Flows and WACC

- Once income tax expense is computed, you should convert it from an economic basis to a cash basis for valuation, as accrual taxes do not reflect the cash taxes actually paid.
- **Operating deferred taxes** → affect cash taxes, NOPLAT, and FCF
- **Non-operating deferred taxes** → does not affect FCF
 - Must be valued separately (net operating loss carry-forwards) or ignored (when not deductible)

Multiplying operating profits by company's statutory tax rate is typically upward-biased because it fails to recognize that foreign operating earnings are often taxed at different levels.

TAXES

Computing Operating Taxes Using Financial Statements

- Review the notes to the financial statements regarding IAS 12 disclosures

Income Statement	
(...)	€ m
EBITDA	1,232
D&A	(228)
Operating profit	1,004
Losses on asset sale	(31)
Interest	(241)
EBT	732
Taxes	(198)
Net Income	534

Tax reconciliation (IAS 12 requirements)	
	%
Statutory rate	35.0
Tax credits	(5.4)
Audit revisions	1.6
Foreign-income adjustment	(4.2)
<i>Effective tax rate</i>	<i>27.0</i>

Income tax	
(...)	€ m
Statutory rate	256
Tax credits	(40)
Audit revisions	12
Foreign-income adjustment	(31)
Reported taxes	198

732 × 35%

TAXES

Computing Operating Taxes Using Financial Statements

Eliminate one-time and non-operating taxes

Estimating Operating Taxes	
Reported taxes	198
Audit revisions	(12)
Reported taxes: operating only	186
<i>Plus</i> : D&A tax shield (at 35%)	80
<i>Plus</i> : Interest tax shield (at 35%)	84
<i>Plus</i> : Taxes on losses (at 28%)	9
<i>Less</i> : Taxes on gains (at 28%)	-
Operating taxes	359
Operating taxes / EBITDA	29.1%

Remove non-operating taxes that are found in the reconciliation table

Remove taxes related to non-operating income or expenses at appropriate marginal tax rate, including D&A

* Taxes on capital gains/losses is 28%

Operating taxes of **€359m** are *accrual-based* and correspond to estimated tax expense over operating income, and may differ from operating cash taxes

TAXES

Converting Operating Taxes to Operating Cash Taxes

Deferred Tax Assets (DTA)

- Tax loss carry-forwards
- Pension and postretirement benefits
- Etc.

Deferred Tax Liabilities (DTL)

- Accelerated depreciation
- Instalment sale
- Etc.

DTA and DTL may be both operational and non-operational

TAXES

Converting Operating Taxes to Operating Cash Taxes

	Current Year	Prior Year	Change
DTA (operational)	2,093	2,013	80
DTL (operational)	3,218	3,156	62
Net (DTL - DTA)	1,125	1,143	(18)

	Current Year
Operating taxes	359
Net change in deferred taxes	18
Operating cash taxes	377

Operating CETR (over EBITDA)	30.6%
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Non-operating cash taxes (savings)	(173)
Cash taxes	204

Cash effective tax rate (over EBT)	27.9%
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Tax rate over operational profits (FCF)

Tax savings from non-operating expenses

2

Non-Operating Expenses, One-Time Charges, Reserves, and Provisions

FINANCIAL ANALYSIS AND REPORTING

NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

NOPLAT should include only items related to the ongoing core business, regardless of the accounting classification.

1. Recognize the IS into operating and non-operating items

Operating items usually grow in line with revenues and are related to the core business (e.g., ALTRI's Other Income, Note 33). Adjustments require a significant amount of judgment.

2. Search the notes for embedded one-time items

Taxes (e.g., EDP in 2016) and provisions are examples of one-time items.

3. Analyze each extraordinary item for its impact on future operations

Non-operating items not included in EBITDA will not be included in FCF if the charge is not likely to continue in the future.

Non-Operating Expenses and One-Time Charges



15 Inventories

Inventories are summarized as follows:

Philips Group
Inventories in millions of EUR
 2015 - 2016

	2015	2016
Raw materials and supplies	1,068	1,040
Work in process	475	446
Finished goods	1,920	1,906
Inventories	3,463	3,392

The write-down of inventories to net realizable value was EUR 108 million in 2016 (2015: EUR 170 million). The write-down is included in cost of sales.



(write-off of Intangibles)

Exploration expense

Total exploration expense of \$1,721 million (2015 \$2,353 million, 2014 \$3,632 million) included the write-off of expenses related to unsuccessful drilling activities, lease expiration or uncertainties around development in the Gulf of Mexico (\$611 million), Brazil (\$601 million), and others (\$167 million), partially offset by a net write-back of \$103 million across several blocks in India (see Financial statements – Note 7).



NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

Asset
write-offs

Restructuring
charges

Litigation
charges

Gains and
losses on the
sale of assets

Taxes
One-Off Effects

Restructuring provisions. In 2016, a net € 182 million provision related to restructuring measures was booked by Airbus.

Following the announcement in September 2016 of the merger of the Group structure with its largest Division Airbus Commercial Aircraft to increase future competitiveness, a restructuring provision of € 160 million has been recorded at year-end 2016.

AIRBUS

NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

Asset
write-offs

Restructuring
charges

Litigation
charges

Gains and
losses on the
sale of assets

Taxes
One-Off Effects

2.1.3.3 Use of EBIT Adjusted

AIRBUS

Airbus uses an alternative performance measure **EBIT Adjusted** as a key indicator capturing the underlying business margin by excluding material charges or profits caused by movements in provisions related to programmes, restructurings or foreign exchange impacts as well as capital gains/losses from the disposal and acquisition of businesses.

Set forth below is a table reconciling Airbus' EBIT with its EBIT Adjusted.

(in €m)	Year ended 31 December 2016	Year ended 31 December 2015	Year ended 31 December 2014
EBIT	2,258	4,062	3,991
PDP mismatch / BS revaluation	930	635	(142)
A400M business update	2,210	290	551
A350 XWB business update	385	0	0
ASL creation phase 2	(1,175)	0	0
Portfolio in Airbus Defence and Space and Airbus Commercial Aircraft	33	(90)	(40)
Restructuring / Transformation	182	(41)	0
Dassault Aviation disposal	(868)	(748)	(343)
EBIT Adjusted	3,955	4,108	4,017

NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

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charges

Litigation
charges

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losses on the
sale of assets

Taxes
One-Off Effects

6 Other operating expenses

€ million	2016	2015
Valuation allowances on receivables and other assets	1,787	1,674
Losses from foreign currency hedging derivatives	2,964	5,083
Foreign exchange losses	3,077	3,260
Expenses from cost allocations	542	695
Expenses for termination agreements	424	502
Losses on disposal of noncurrent assets	144	106
Miscellaneous other operating expenses	7,970	8,853
	16,907	20,171



Volkswagen

Miscellaneous other operating expenses include litigation expenses of €5.1 billion (previous year: €7.0 billion) in connection with the diesel issue as well as provisions of €0.4 billion for the antitrust proceedings that the European Commission opened against European truck manufacturers including MAN and Scania. The expenses for termination agreements result primarily from the restructuring expenses for the South American market and at MAN. In addition, the changes in the currency hedging derivatives are due to the exchange rate changes between the trade price and the price on realization; this applies in particular to the US dollar, the Chinese renminbi and sterling.

NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

Asset
write-offs

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charges

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losses on the
sale of assets

Taxes
One-Off Effects

With respect to the 2017-2020 business plan in particular, management expects to deliver approximately €5-7 billion of additional cash flows from asset disposals, the main part of which will comprise the divestment of stakes in the Group's exploration assets thereby in essence monetizing some of the Group's recent exploration successes and reserves. These additional cash flows are intended to provide the Group with further financial flexibility in view of funding organic growth and the Group's planned shareholder distributions in a manner consistent with the Group's target capital structure.

At the end of 2016, leverage was 0.28, lower than the threshold of 0.3, decreasing by further 4 points when factoring the pro-forma effect of Zohr disposal.

Disposals Defined in the year disposals for a total consideration of €2.6 billion, 40% of the 2016-2019 four-year target announced in March 2016 (€7 billion).



NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges



Profit & Loss Items below EBITDA (€ m)	2016	2015	Δ %	Δ Abs.
Pre-tax Profit	1,351	1,587	-15%	-236
Income Taxes	89	278	-68%	-189
<i>Effective Tax rate (%)</i>	<i>7%</i>	<i>18%</i>	<i>-</i>	<i>-10.9 pp</i>

Income taxes amounted to €89m (-€189m YoY), impacted by one-off net tax savings of €163m in 2016. Excluding one-offs, effective tax rate would be 19%, in line with 2015. Additionally, the 2016 results reflect EDP's share on the extraordinary contribution applied to the energy sector in Portugal (0.85% on net assets; €62m in 2016).



NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Non-Operating Expenses and One-Time Charges

Asset
write-offs

Restructuring
charges

Litigation
charges

Gains and
losses on the
sale of assets

Taxes
One-Off Effects

The reconciliation between the theoretical and the effective income tax expense for the Group, as at December 2016, is analysed as follows:

Thousand Euros	Dec 2016
Profit before income tax and CESE	1,350,537
Nominal income tax rate (*)	29.5%
Theoretical income tax expense	398,408
Different tax rates (includes state surcharge)	32,646
Tax losses and tax credits	-25,909
Tax benefits	-19,074
Differences between accounting and fiscal provisions / depreciations	-23,370
Fiscal revaluations	-173,904
Exceptional regime for regularisation of debts from fiscal and contributing nature to social security - "PERES" (see note 37)	57,342
Accounting / fiscal temporary differences on the recognition / derecognition of assets	-121,472
Other adjustments and changes in estimates	-35,871
Effective income tax expense as per the Consolidated Income Statement	88,796

* Statutory Corporate Income Tax rate applicable in Portugal (21%), municipal surcharge (1.5%) and the state surcharge (7%)

On-off items
have no effect
on future tax
obligations

The caption Fiscal revaluations includes essentially the net effect of the fiscal revaluation of certain eligible EDP assets held in Portugal, in accordance with the Decree-Law 66/2016 of 3 November, which led to an increase in those assets' tax base of 1,185 million Euros. As a consequence, the EDP Group recognised deferred tax assets of 339 million Euros that will be recovered through the tax deduction of the underlying revalued assets, to be amortised in 8 years starting in 2018. The fiscal revaluation reserve was taxed in 2016 at a 14% flat rate (payable in 3 equal instalments, the first having been paid in 20 December 2016 and the remaining two will be due in 15 December 2017 and 15 December 2018) and recognised the corresponding current income tax amount of 165 million Euros (see notes 40 and 41). Consequently, the net effect of this revaluation in the net income for the period is of approximately 174 million Euros.

NON-OPERATING EXPENSES, ONE-TIME CHARGES, RESERVES, AND PROVISIONS

Treatment of Provisions and Reserves

Classification	Examples	Treatment in NOPLAT	Treatment in invested capital	Treatment in valuation
Ongoing operating provisions	Product returns and warranties	Deduct provisions from revenue to determine NOPLAT	Deduct reserve from operating assets to determine invested capital	Provision is part of FCF
Long-term operating provisions	Plant decommissioning costs and unfunded retirement plans	Deduct operating portion from revenue to determine NOPLAT, and treat interest portion as non-operating	Treat reserve as a debt equivalent	Deduct reserve's present value from the value of operations (from EV to E)
Non-operating provisions	Restructuring charges, such as expected severance due to layoffs	Convert accrual provision into cash provision, and treat as non-operating	Treat reserve as a debt equivalent	Deduct reserve's present value from the value of operations (from EV to E)
Income-smoothing provisions	Provisions for the sole purpose of income smoothing	Eliminate provision by converting accrual provision into cash provision	Treat reserve as an equity equivalent	Since income-smoothing provisions are noncash, there is no effect

3

Leases, Pensions and Other Obligations

FINANCIAL ANALYSIS AND REPORTING

LEASES, PENSIONS AND OTHER OBLIGATIONS

Use of accounting rules to acquire assets and keep the corresponding debts “off balance sheet”

Operating Leases – recognize a periodic rental expense

↓ Operating Profits

↓ Invested Capital Increase in efficiency? Which ratios?

↓ Leverage

↑↓ WACC (Debt-to-EV)

1. Capitalize the value of leased assets
2. Adjust long-term debt
3. Adjust operating profit by removing rental expense and add interest on leases

IFRS 16 changed the accounting treatment of leases from 2019 onwards

LEASES, PENSIONS AND OTHER OBLIGATIONS

Operating Leases

Estimating the Value of Leased Assets

$$\text{Rental Expense}_t = \text{Asset Value}_{t-1} \left(K_d + \frac{1}{\text{Asset Life}} \right)$$

$$\text{Asset Value}_{t-1} = \frac{\text{Rental Expense}_t}{\left(K_d + \frac{1}{\text{Asset Life}} \right)}$$

If the rental expense in t is 502, the cost of capital to finance the lease is 6.5% and the asset life is 8 years, the asset value in $t-1$ (beginning of t) is about 2,642.

LEASES, PENSIONS AND OTHER OBLIGATIONS

Operating Leases

	2012	2013	2014	2015	2016
Revenues	4,564	5,020	5,221	6,788	8,484
Cost of sales	(2,054)	(2,259)	(2,350)	(3,054)	(3,818)
Other operating cost	(685)	(787)	(905)	(1,041)	(1,197)
Rental expense	-	(502)	(552)	(607)	(790)
Operating income	1,826	1,472	1,414	2,085	2,679
Interest	(292)	(236)	(226)	(334)	(429)
EBT	1,534	1,236	1,188	1,751	2,251
Taxes	(460)	(371)	(356)	(525)	(675)
Net Income	1,073	865	831	1,226	1,575

Rental expense	-	502	552	607	790
Asset life	8	8	8	8	8
R _D for leases	6.5%	6.5%	6.5%	6.5%	6.5%
Value of operating leases	2,642	2,907	3,197	4,156	-

LEASES, PENSIONS AND OTHER OBLIGATIONS

Operating Leases

	2012	2013	2014	2015	2016
Revenues	4,564	5,020	5,221	6,788	8,484
Cost of sales	(2,054)	(2,259)	(2,350)	(3,054)	(3,818)
Other operating cost	(685)	(787)	(905)	(1,041)	(1,197)
Rental expense	-	(502)	(552)	(607)	(790)
Lease depreciation	-	-	-	-	-
Operating income	1,826	1,472	1,414	2,085	2,679
Operating taxes	(548)	(442)	(424)	(625)	(804)
NOPAT	1,278	1,030	990	1,459	1,876
Net Income	1,073	865	831	1,226	1,575
After-tax interest expense	204	165	158	233	300
After-tax lease interest	-	-	-	-	-
NOPAT	1,278	1,030	990	1,459	1,876

	2012	2013	2014	2015	2016
Revenues	4,564	5,020	5,221	6,788	8,484
Cost of sales	(2,054)	(2,259)	(2,350)	(3,054)	(3,818)
Other operating cost	(685)	(787)	(905)	(1,041)	(1,197)
Rental expense	-	-	-	-	-
Lease depreciation	-	(330)	(363)	(400)	(520)
Operating income	1,826	1,644	1,603	2,292	2,950
Operating taxes	(548)	(493)	(481)	(688)	(885)
NOPAT	1,278	1,151	1,122	1,605	2,065
Net Income	1,073	865	831	1,226	1,575
After-tax interest expense	204	165	158	233	300
After-tax lease interest	120	132	145	189	-
Adjusted NOPAT	1,398	1,163	1,135	1,648	1,876

Adjusted NOPAT

LEASES, PENSIONS AND OTHER OBLIGATIONS

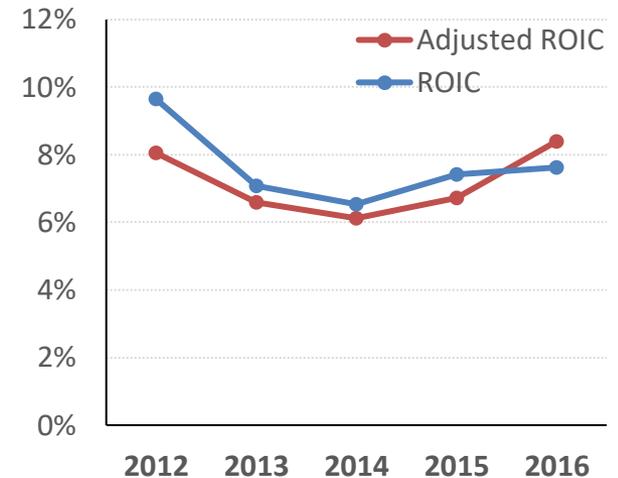
Operating Leases

$$\text{ROIC} = \frac{\text{EBIT} \times (1 - \text{Tax Rate})}{\text{Invested Capital}} = \frac{\text{NOPAT}}{\text{Invested Capital}}$$

NOPAT = EBIT × (1 – Tax Rate)

NOPLAT = NI + After Tax Interest Expense + Deferred Taxes

ROIC can be calculated using both NOPAT and NOPLAT



	2012	2013	2014	2015	2016
Long-term assets	6,846	7,531	7,832	10,181	12,727
Short-term assets	14,605	16,065	16,708	21,720	27,150
Capitalized operating leases	-	-	-	-	-
Operating assets	21,451	23,596	24,540	31,902	39,877
Equity	6,253	6,878	7,153	9,299	11,624
Debt	6,983	7,681	7,988	10,385	12,981
Capitalized operating leases	-	-	-	-	-
Operating liabilities	8,215	9,037	9,398	12,218	15,272
Liabilities + Equity	21,451	23,596	24,540	31,902	39,877



	2012	2013	2014	2015	2016
Long-term assets	6,846	7,531	7,832	10,181	12,727
Short-term assets	14,605	16,065	16,708	21,720	27,150
Capitalized operating leases	2,642	2,907	3,197	4,156	-
Operating assets	24,093	26,502	27,737	36,058	39,877
Equity	6,253	6,878	7,153	9,299	11,624
Debt	6,983	7,681	7,988	10,385	12,981
Capitalized operating leases	2,642	2,907	3,197	4,156	-
Operating liabilities	8,215	9,037	9,398	12,218	15,272
Liabilities + Equity	24,093	26,502	27,737	36,058	39,877

Invested Capital	13,236	14,559	15,142	19,684	24,605
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15,878	17,466	18,339	23,840	24,605
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ROIC	9.7%	7.1%	6.5%	7.4%	7.6%
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8.0%	6.6%	6.1%	6.7%	8.4%
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Adjusted ROIC

LEASES, PENSIONS AND OTHER OBLIGATIONS

Operating Leases

Capital Structure	2013	%
MVE	6,878	47%
Debt	7,681	53%
Value of operating leases	-	-
EV	14,559	100%

2013	%
6,878	39%
7,681	44%
2,907	17%
17,466	100%

WACC can be adjusted to account for the after-tax cost of capital of operating leases:

$$\text{WACC} = K_e \frac{\text{MVE}}{\text{EV}} + K_d \frac{\text{Debt}}{\text{EV}} (1 - \text{Tax Rate}) + K_{ol} \frac{\text{Value oper. leases}}{\text{EV}} (1 - \text{Tax Rate})$$

LEASES, PENSIONS AND OTHER OBLIGATIONS

Use of accounting rules to acquire assets and keep the corresponding debts “off balance sheet”

Pensions and Other Post-Retirement Benefits:

1. Identify the funded status

PV of Future Obligations  Value of Investments Held  **Underfunded**
Debt equivalent

PV of Future Obligations  Value of Investments Held  **Overfunded**
Non-operating assets

2. Deduct (add) unfunded pension liabilities (excess pension assets) from EV to arrive at Equity.

3. Remove the accounting pension expense from cost of sales. Replace it with the service cost and amortization of prior service costs reported in the notes.

LEASES, PENSIONS AND OTHER OBLIGATIONS

Use of accounting rules to acquire assets and keep the corresponding debts “off balance sheet”

Securitized Receivables – when a company sells its accounts receivables to another company (not a factoring company as we focus on off balance sheet items).

1. Add back securitized receivables to the balance sheet
2. Make a correspondent short-term debt

Other off-balance sheet obligations must be considered as debt and its value deducted from the value of operations (from EV to E).

4

Capitalized Expenses

FINANCIAL ANALYSIS AND REPORTING

CAPITALIZED EXPENSES

Companies with significant intangible assets:

- Technology;
- Pharmaceuticals;
- Etc.

Accounting rules dictate that entire outlay for R&D must be expensed immediately in the research phase, while capitalized in the development phase.

- **Underestimation** of historical investments by expensing (boost ROE and ROIC in later years);
- **Manipulation** of short-term earnings;
- Improve performance when growth is falling (R&D budgets at a fixed percentage of revenue).

CAPITALIZED EXPENSES

ROIC in the base scenario

	2012	2013	2014	2015	2016
Revenues	4,564	5,020	5,221	6,788	8,484
Cost of sales	(2,054)	(2,259)	(2,350)	(3,054)	(3,818)
Other operating cost	(685)	(787)	(905)	(1,041)	(1,197)
R&D expense	(822)	(904)	(994)	(1,093)	(1,421)
Operating profit	1,004	1,070	972	1,599	2,048
Operating taxes	(388)	(427)	(444)	(577)	(721)
NOPAT	616	644	528	1,022	1,326
Invested capital					
PP&E	4,652	5,350	6,152	7,075	7,429
Goodwill	651	1,070	2,461	2,830	3,113
Other intangibles	195	321	738	849	934
Operating working capital	(2,688)	(3,847)	(7,184)	(6,941)	(5,752)
Other assets	140	160	185	212	223
Invested capital	2,951	3,054	2,352	4,025	5,946
ROIC	20.9%	21.1%	22.5%	25.4%	22.3%

CAPITALIZED EXPENSES

Adjusting Invested Capital for Capitalized Expenses

	2012	2013	2014	2015	2016
Capitalized R&D asset					
R&D intangible, beginning	-	822	1,684	2,592	3,549
R&D expense	822	904	994	1,093	1,421
Amortization (useful life of 20 years)	-	(41)	(86)	(136)	(191)
R&D intangible, ending	822	1,684	2,592	3,549	4,780

Invested capital	2,951	3,054	2,352	4,025	5,946
Capitalized R&D asset	822	1,684	2,592	3,549	4,780
Adjusted invested capital	3,772	4,738	4,943	7,574	10,726

← Capitalize R&D expenses (net)

NOPAT	616	644	528	1,022	1,326
R&D expense	822	904	994	1,093	1,421
Amortization of R&A asset	-	(41)	(86)	(136)	(191)
Adjusted NOPAT	1,438	1,506	1,436	1,979	2,557

← Remove the R&D expense

← Add amortization of R&D asset

Adjusted ROIC	38.1%	31.8%	29.1%	26.1%	23.8%
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Unlike ROIC, **FCF will not change** when expenses are capitalized. The expense is merely moved from CFO to CFI.

Therefore, capitalizing R&D does not affect valuation but **changes your perception of the company's ability to create value in the future.**

CAPITALIZED EXPENSES

What happens to ROIC when the company cuts R&D expense in the future?

	2016	2017	2018
Revenues	8,484	8,484	8,484
Cost of sales	(3,818)	(3,818)	(3,818)
Other operating cost	(1,197)	(1,197)	(1,197)
R&D expense	(1,421)	0	0
Operating profit	2,048	3,469	3,469
Operating taxes	(721)	(721)	(721)
NOPAT	1,326	2,748	2,748

Invested capital			
PP&E	7,429	7,429	7,429
Goodwill	3,113	3,113	3,113
Other intangibles	934	934	934
Operating working capital	(5,752)	(5,752)	(5,752)
Other assets	223	223	223
Invested capital	5,946	5,946	5,946

ROIC	22.3%	46.2%	46.2%
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	2016	2017	2018
Capitalized R&D asset			
R&D intangible, beginning	3,549	4,780	4,519
R&D expense	1,421	0	0
Amortization (useful life of 20 years)	(191)	(262)	(262)
R&D intangible, ending	4,780	4,519	4,257

Invested capital	5,946	5,946	5,946
Capitalized R&D asset	4,780	4,519	4,257
Adjusted invested capital	10,726	10,465	10,203

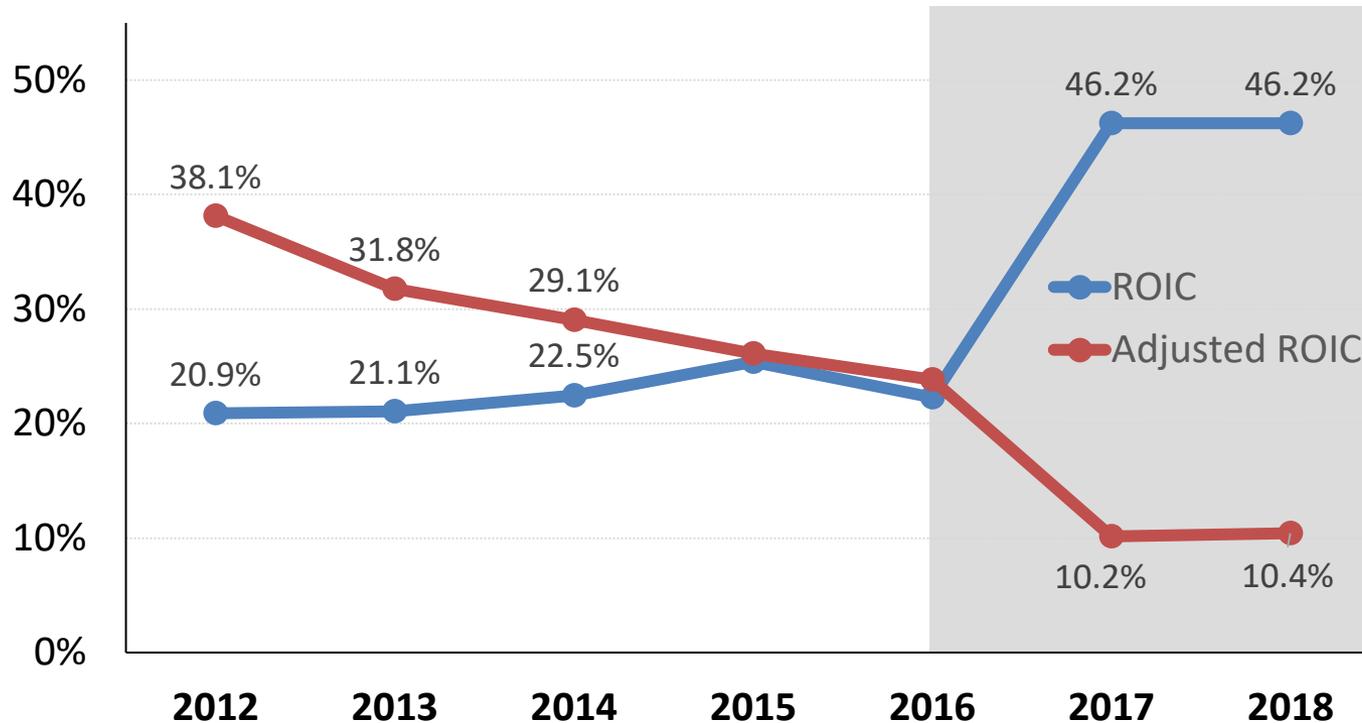
NOPAT	1,326	1,326	1,326
R&D expense	1,421	0	0
Amortization of R&D asset	(191)	(262)	(262)
Adjusted NOPAT	2,557	1,065	1,065

Adjusted ROIC	23.8%	10.2%	10.4%
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Consider that all items in the income statement and the Invested Capital remain at 2016YE figures, except for R&D expense.

CAPITALIZED EXPENSES

What happens to ROIC when the company cuts R&D expense in the future?



Smoothing the way we look to company's efficiency at allocating resources to profitable investments?

5

Inflation

FINANCIAL ANALYSIS AND REPORTING

INFLATION

Adjustments in Times of Significant Inflation

1. Forecast Operating Performance in Real Terms

2. Build Financial Statements in Nominal Terms

Multiply real-terms equivalents by an estimated inflation index (IX_t) for the year

3. Build Financial Statements in Real Terms

Most items for the IS were estimated in Step 1

4. Forecast FCF in Real and Nominal Terms

$$\text{Investment in } NWC_t^R = \text{Increase in } NWC_t^R + NWC_{t-1}^R \left(1 - \frac{IX_{t-1}}{IX_t} \right)$$

INFLATION

Adjustments in Times of Significant Inflation

5. Estimate DCF Value in Real and Nominal Terms (cross-check results)

For DCF in real (nominal) terms use both the FCF and the WACC in real (nominal) terms

$$1+WACC_t^N = (1+WACC_t^R)(1 + Inflation_t)$$

Adjust the FCF value to the annual monetary loss on NWC:

$$FCF_t^R = \left(1 - \frac{g_t^R}{ROIC_t^R}\right) NOPLAT_t^R - NWC_{t-1}^R \left(1 - \frac{IX_{t-1}}{IX_t}\right)$$

Adjust the perpetuity assumption for inflation (i) and the ration of NWC to Invested Capital (IC):

$$\text{Terminal}^R = \frac{\left(1 - \frac{G^R}{ROIC^R}\right) NOPLAT^R}{WACC^R - g^R}$$

where,

$$G^R = g^R - \left[\frac{NWC^R}{IC^R} \left(\frac{i}{1+i} \right) \right]$$

Need a longer horizon for valuation than in periods with no or low inflation.

6

Foreign Currency

FINANCIAL ANALYSIS AND REPORTING

FOREIGN CURRENCY

Companies with Multinational Operations

Presentation Currency (PC) – currency in which financial statements are presented;

Functional Currency (FC) – currency of the primary economic environment in which an entity operates, typically the currency in which an entity generates and expends cash;

Local Currency (LC) – currency where the company operates.

Relevant to account for exposure to foreign exchange risk (transaction exposure).

import purchase vs export sale

<u>Transaction</u>	<u>Type of Exposure</u>	<u>(Foreign Currency)</u>	
		<u>Strengthens</u>	<u>Weakens</u>
Export sale	Asset (receivables)	Gain	Loss
Import Purchase	Liability (payables)	Loss	Gain

FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

Current Rate Method – all assets and liabilities are translated at the current exchange rate

- Translation adjustment classified in a separate component of equity (**BS**)

Temporal Method – assets and liabilities should be translated in such a way that the measurement basis in the foreign currency is preserved after translating to the parent's presentation currency

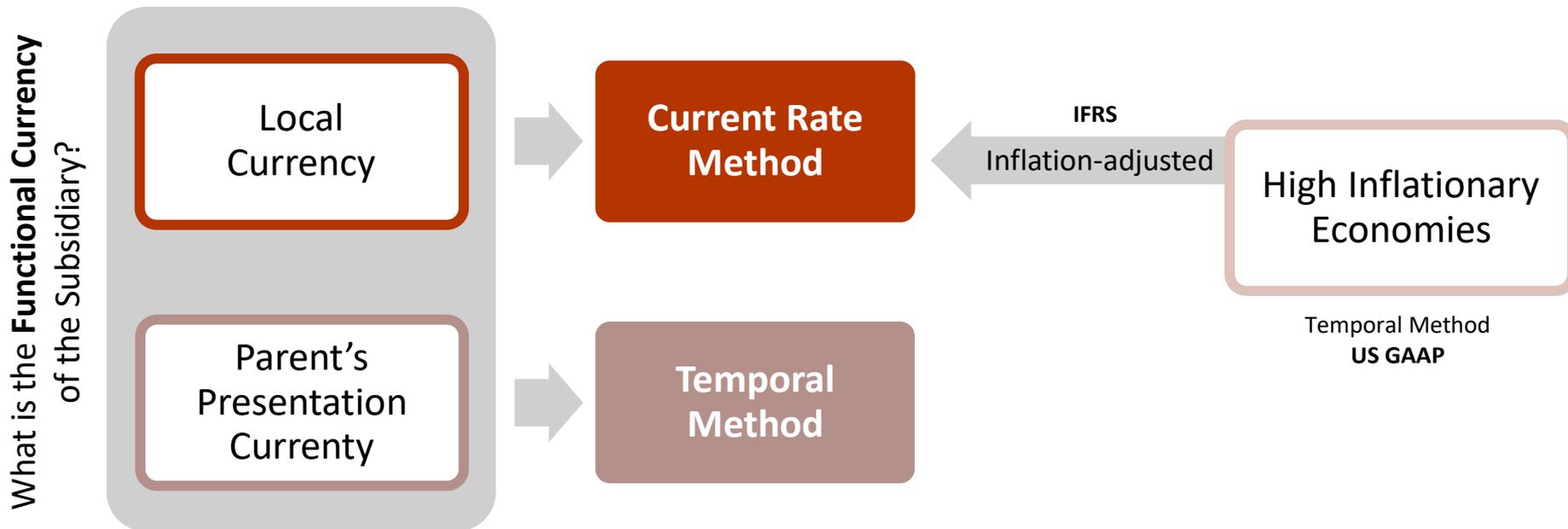
- Exchange differences recognized in net income (**IS**)

Transfer prices affect the allocation of profit between companies (inter-company transactions) and will affect company's **effective tax rate**.

FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

The **Functional Currency** is key to determine which method of translation of foreign currency financial statements is appropriate.



Hyperinflationary economics:

IFRS – no specific definition, although indicates a cumulative three-year inflation rate approaching or exceeding 100%

US GAAP – cumulative three-year inflation rate exceeds 100%, which equates to an average of about 26% per year

FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

Translation method:	Current Rate Method	Temporal Method
Assets		
Non-monetary		
- measured at current value	Current rate	Current rate
- measured at historical costs	Current rate	Historical rates
Monetary (cash and receivables)	Current rate	Current rate
Liabilities		
Non-monetary		
- measured at current value	Current rate	Current rate
- not measured at current value, such as deferred revenue	Current rate	Historical rates
Monetary (payables, debt, deferred income taxes, accrued expenses)	Current rate	Current rate
Equity		
Other than retained earnings	Historical rates	Historical rates
Retained earnings	Beginning balance plus translated net income less dividends at historical rate	Beginning balance plus translated net income less dividends translated at historical rate
Revenues		
	Average rate	Average rate
Expenses		
Most expenses	Average rate	Average rate
Translated at historical exchange rate (e.g., COGS, D&A)	Average rate	Historical rates
Treatment of the translation adjustment in consolidated statements	Accumulated as a separate component of equity	Included as gain or loss in net income

FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

Example of translation of financial statements from a subsidiary operating in the US to the parent company headquartered in Europe

Inventory: FIFO

EUR / USD	
1.09	1 January 2016
1.11	Average, 2016
1.23	Weighted-average rate when inventory was acquired
1.07	15 November 2016 when dividends were declared
1.05	31 December 2016

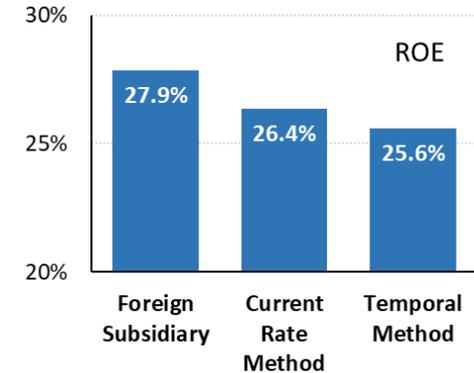
	FC = \$US				FC = EUR				Diff %
	US\$	Current Rate		Temporal		Rate	EUR		
		Rate	EUR	Rate	EUR				
Sales	4,564	1.11	A	4,112	1.11	A	4,112	+0.0%	
COGS	(2,054)	1.11	A	(1,850)	1.23	H	(1,670)	+10.8%	
SG&A	(685)	1.11	A	(617)	1.11	A	(617)	+0.0%	
D&A	(342)	1.11	A	(308)	1.09	H	(314)	-1.8%	
Interest expense	(293)	1.11	A	(264)	1.11	A	(264)	+0.0%	
Income tax	(460)	1.11	A	(414)	1.11	A	(414)	+0.0%	
Income before trans.gain (loss)	730			658			833	-21.0%	
Traslation gain (loss)	N/A			N/A	to B/S		(236)		
Net income	730			658			596	+10.3%	
Less: Dividends	(110)	1.07	H	(102)	1.07	H	(102)		
Retained earnings	621			555	from B/S		494	+12.4%	

Adjust from retained earnings to NI (plug in number)

FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

	US\$	Current Rate		Temporal		Diff %
		Rate	EUR	Rate	EUR	
Assets						
Intangibles	651	1.05	C 620	1.09	H 598	
PP&E	4,652	1.05	C 4,430	1.09	H 4,268	
Less: accumulated D&A	(1,326)	1.05	C (1,263)	1.09	H (1,216)	
Total non-current assets	3,977		3,788		3,649	+3.8%
Inventory	195	1.05	C 186	1.23	H 159	+17.1%
Accounts receivable	488	1.05	C 465	1.05	C 465	+0.0%
Cash	368	1.05	C 350	1.05	C 350	+0.0%
Total current assets	1,052		1,002		975	+2.8%
Total Assets	5,029		4,790		4,624	+3.6%
Equity						
Capital stock	2,000	1.09	H 1,835	1.09	H 1,835	+0.0%
Retained earnings	621	from I/S	555	to B/S	494	+12.4%
Translation adjustment	N/A	to B/S	105		N/A	
Total Equity	2,621		2,495		2,329	+7.1%
Liabilities						
Long-term notes payable	2,158	1.05	C 2,055	1.05	C 2,055	
Accounts payable	251	1.05	C 239	1.05	C 239	
Total Liabilities	2,409		2,294		2,295	-0.0%
Equity + Liabilities	5,030		4,790		4,624	+3.6%



Retained earnings that ensure:
A = E + L

Translation adjustment that ensures:
A = E + L

Return On Equity (ROE)	27.9%	26.4%	25.6%
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FOREIGN CURRENCY

Translation of Foreign Currency Financial Statements

Implications for financial analysis?

The subsidiary exhibits higher gross margins, although lower net profit margin in the temporal method, and enhanced ability to cover the cost of debt.

Leverage is also penalized using the temporal method.

	US\$	Current EUR	Temporal EUR
Current Ratio	4.19	4.19	4.07
Current assets	1,052	1,002	975
Current liabilities	251	239	239
Cash Ratio	1.47	1.47	1.46
Cash & Equivalents	368	350	350
Current liabilities	251	239	239
Interest Coverage Ratio	5.06	5.06	5.72
EBIT	1,483	1,336	1,511
Interest expense	293	264	264
Debt-to-Equity	0.82	0.82	0.88
Debt	2,158	2,055	2,055
Equity	2,621	2,495	2,329
Gross Profit Margin	55.0%	55.0%	59.4%
Gross profit	2,510	2,261	2,442
Sales	4,564	4,112	4,112
Net Profit Margin	16.0%	16.0%	14.5%
Net income	730	658	596
Sales	4,564	4,112	4,112
Receivables Days	39.1	41.3	41.3
Receivables	488	465	465
Sales	4,564	4,112	4,112
Inventory Turnover	10.5	9.9	10.5
Inventories	195	186	159
COGS	2,054	1,850	1,670
Payables Days	44.6	47.2	52.3
Payables	251	239	239
COGS	2,054	1,850	1,670
Asset Turnover	0.91	0.86	0.89
Sales	4,564	4,112	4,112
Assets	5,029	4,790	4,624

h) Conversion of companies' financial statements with a functional currency other than Euros.

The assets and liabilities recorded in the financial statements of foreign companies (companies that do not use Euros as a functional currency) are translated to Euros using the exchange rates in force on the reference date of the consolidated statement of the financial position. The income and expenses, as well as cash flows, are translated to Euros using the average exchange rates for the year, except for foreign companies with a functional currency considered as hyperinflationary, where the exchange rates in force as at the reference date of the consolidated statement of the financial position are used. The resulting exchange differences, generated after 1 January 2004, are recorded in equity under the heading "Currency translation reserve". Exchange differences generated up to 1 January 2004 (IFRS transition date) were transferred to the heading "Other reserves and retained earnings".

(...)

Currency translation reserve

The "Currency translation reserve" reflects the exchange differences arising from the conversion of financial statements of affiliates expressed in a currency other than Euro and cannot be distributed to shareholders or used to absorb losses.

Companies may use both methods, depending on subsidiary's functional currency

FOREIGN CURRENCY



CONSOLIDATED STATEMENTS OF OTHER COMPREHENSIVE INCOME FOR THE YEARS AND SEMESTERS ENDED AT 31 DECEMBER 2018 AND 2017 (Amounts in thousands Euros)

	Year		2 nd Semester	
	2018 € '000	2017 € '000	2018 € '000	2017 € '000
			(unaudited)	(unaudited)
Consolidated net profit of the year	93,397	61,441	52,316	21,921
Items of other comprehensive income that may be reclassified to the income statement:				
Companies consolidated by the full consolidation method				
Exchange differences arising from the conversion of financial statements expressed in foreign currencies				
Of which, associated with the impact of hyperinflation in Angola in previous years	(29,442)	-	(7,197)	-
Others	(176,666)	(51,195)	(91,368)	(31,541)
Variation, net of taxes, in the fair value of derivative financial instruments of cash flow hedges	(480)	(616)	(109)	(653)
Impact of hyperinflation in Angola	35,123	84,933	37,768	84,933
Other comprehensive income of companies consolidated by the full consolidation method	-	(189)	-	(2,142)
Companies consolidated by the equity method				
Exchange differences arising from the conversion of financial statements expressed in foreign currencies	(510)	(422)	(655)	(326)
Variation, net of taxes, in the fair value of derivative financial instruments of cash flow hedges	283	1,416	178	634
Other comprehensive income of companies consolidated by the equity method	-	12	-	211
Items of other comprehensive income that will not be reclassified to the income statement:				
Companies consolidated by the full consolidation method				
Variation, net of tax, of the tangible assets revaluation surplus	(48)	(2,233)	(48)	2,074
Actuarial deviations, net of taxes	903	(1,475)	903	(1,475)
Variation, net of taxes, in the fair value of other financial investments recorded at fair value through other comprehensive income	(11,249)	-	(10,696)	-
Total of other comprehensive income	(182,084)	30,232	(71,225)	51,716
Total comprehensive income of the year	(88,687)	91,673	(18,909)	73,637
Attributable:				
to non-controlling interests	7,630	78,431	18,583	42,945
to the Group	(96,317)	13,242	(37,492)	30,692

7

Cannibalization Effects and Impacts on NWC and FCF

FINANCIAL ANALYSIS AND REPORTING

CANNIBALIZATION EFFECTS AND IMPACTS ON NWC AND FCF

New Products or M&As Often Generate Cannibalization Effects

The company plans to launch a new product that will cannibalize 5% of current sales, while gross margin is expected at 48%.

The new product requires a €120m CAPEX, depreciated in 15 years, straight-line.

Inventory days for the new product are reduced to 9 days, while the company will be able to increase accounts payable to 50 days.

SG&A expenses will be €32m.

	Current Operations	New Product	Combined	Diff
Sales	4,564	826	5,162	+13.1%
COGS	(2,054)	(430)	(2,381)	+15.9%
<i>% COGS</i>	45.0%	52.0%	46.1%	
Gross profit	2,510	396	2,781	+10.8%
<i>Gross profit margin</i>	55.0%	48.0%	53.9%	
SG&A	(685)	(32)	(717)	+4.7%
D&A	(342)	(8)	(350)	+2.3%
Operating profit	1,483	356	1,714	+15.6%
<i>Operating profit margin</i>	32.5%	43.1%	33.2%	

CANNIBALIZATION EFFECTS AND IMPACTS ON NWC AND FCF

New Products or M&As Often Generate Cannibalization Effects

	Current Operations	New Product	Combined	Diff
Inventory	205	43	206	+0.2%
Accounts receivable	261	47	295	+13.1%
Accounts payable	251	24	297	+18.4%
NWC	215	67	203	-5.5%
Δ NWC from Cannibalization			(12)	

Inventory days	36.5	9.0	31.5	-13.6%
Accounts receivable days	20.9	20.9	20.9	+0.0%
Accounts payable days	44.6	50.0	45.6	+2.2%

EBIT (1 - t)	1,112	267	1,286	+15.6%
D&A	342	8	342	+0.0%
ΔNWC	150	67	138	-7.9%
Capex	500	120	620	+24.0%
FCF	805	89	870	+8.1%
Δ FCF			65	

NWC is adjusted taking into account the cannibalization effect and the change in efficiency ratios.

FCF is only +€65m +8.1%, due to CAPEX effects to launch the new product.

For future periods, *ceteris paribus*, combined FCF without additional CAPEX is about €990m +€185m +23.0%.

If the cannibalization rate is 10%, the change in FCF is negative, -19.

* 25% corporate income tax rate