University of Zurich[UZH]

Industrial: OC Oerlikon Corp and Sulzer

Advanced Valuation I & II

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1. Introduction

This report is intended to value the companies of OC Oerlikon Corporation AG (OERL) and Sulzer AG (SUN). Both firms are listed on SIX Swiss Exchange. The valuation date is 9 May 2022.

The Oerlikon Group is structured into two Divisions: Surface Solutions and Polymer Processing Solutions, which target downstream markets such as the automotive industry, aerospace, energy, tooling industry, and additive manufacturing (3-D printing). (figure 1 in appendix)

Sulzer is a global leader in fluid engineering. It serves customers through three dedicated and highly specialized divisions: flow equipment, industrial services, and Chemtech. (figure 2 in appendix)

We implemented discounted cash flow model in the maximum tax advantage scenario and P/E, EV/EBITDA multiples to value these two machinery and equipment-related companies.

Based on the result from the multiples method, our final valuation for OERL is 6.41 CHF with the current price of 6.81 CHF overpricing, and 63.92 CHF for SUN, also with the current price of 71.1 CHF overpricing.

There are several highlights of this report. In discounted cash flow model, except for the usual procedures, 1) we determine the terminal value of unlevered firm both by *Gordon growth model* and *exit multiple methods* to ensure a reasonable terminal value; 2) we link the final enterprise value from DCF to multiple to contract the difference between market value and intrinsic value. In multiple methods, we put forward two unsupervised machine learning algorithms to ensure the comparability between comps and targets conditional on the same level of performance drivers.

The following sections go as follows: section 2 describes the used methodology, namely discounted cash flow and multiple; section 3 presents the data and its source; section 4 delivers the valuation; and the final section is the conclusion and discussion. As two firms will almost follow the same procedure in section 4 valuation part, we will only present the results for OERL and leave the results for SUN in appendix.

2. Methodology

Discounted cash flow

Discounted cash flow (DCF) is a method that we discount the free cash flow generated by firm's operation with the discount rate appropriately considering time and risk of such cash flow.

The specific DCF will be based on different assumptions on the extent to which tax advantage exist and the debt policy carried out by comparables and targets. If we assume there is no tax on debt income and equity income ($Td = Te = 0$), it will lead to maximum tax advantage case; otherwise, if we assume there is no tax on equity income and that the tax on debt income is equal to the tax on firm, it will lead to minimum tax advantage case. The debt policy carried out by peers and target will further influence the risk of tax shield created by debt finance. Here we will assume the maximum tax advantage case.

The main components of DCF here are free cash flow forecast, discounted rate of free cash flow and tax shield, and the determination of terminal value.

Multiples methods

The reliability of comparable multiples method comes from that the comparable firms ("comps") should be really comparable with target firm. Ideally, comps should operate in the same business as target, and also exhibit same level of performance drivers, such as profitability, growth rate, operating efficiency, and financial distress level. Then, based on the law of one price, we could price target by the price (here are related multiples) of its comparables.

Here we use P/E and EV/EBITDA as the multiples. They both measure how much investors are willing to pay for each unit of Earning or EBITDA. EV/EBITDA could help to directly attain the enterprise value and also be free from the influence of capital structure. P/E is the most commonly used multiple in valuation though it is sensitive to leverage.

3. Data

The necessary data for valuation is acquired mainly from Bloomberg.

For DCF model, we use the financial numbers from Bloomberg's consensus estimation, including revenue, EBITDA, tax payment, etc. to generate the free cash flow in the projection period. To discount the cash flow to present value, we regress the individual stock return (downloaded from the company's official website) on the market premium to get the equity beta. We also check the bond's credit ratings to derive the debt beta, together with the equity beta, and we get the asset beta under certain assumptions.

For the multiples valuation, we use two parts of the data. Firstly, we conduct the benchmark analysis, using multi-feature to cluster and pick the appropriate comps. The multiples used in this part is some financial statistics (eg: Revenue, Gross Profit, EBITDA), profitability margin (eg: Gross Profit/Revenue, EBITDA/Revenue, EBIT/Revenue), growth rate (eg: Revenue growth, EBITDA growth, EPS growth), return on investment (eg: ROIC, ROE, ROA), leverage ratio (eg: Debt/total Cap, Debt/EBITDA), coverage ratio (eg: EBITDA/Int. Exp). The second part is to conduct the target multiple valuation, in this report, we use the trailing EV/EBITDA, forward EV/EBITDA, trailing P/E, and forward P/E.

Financial indication	Benchmark Multiples
Business Risk	Beta
Financial Statistics	Revenue, Gross Profit, EBITDA
Profitability Margin	Gross Profit/Revenue, EBITDA/Revenue, EBIT/Revenue
Growth Rate	Revenue growth, EBITDA growth, EPS growth
Return On Investment	ROIC, ROE, ROA
Leverage Ratio	Debt/total Cap, Debt/EBITDA
Coverage Ratio	EBITDA/Int. Exp

Table 1: Benchmark comparables

Methods	Valuation Multiples
P/E	Trailing 12-month P/E
	Forward P/E
EV/EBITDA	Trailing 12-month EV/EBITDA
	Forward EV/EBITDA

Table 2: Multiples Valuation

4. Valuation

▪ DCF

In this section, we will value OC Oerlikon and Sulzer using DCF.

We start from the calculation of the unlevered free cash flow. Unlevered free cash flow (UFCF) is a company's cash flow before taking interest payments into account. Normally, unlevered free cash flow can be reported in a company's financial statements or calculated using financial statements by analysts. As we are in a valuation task, the only way to obtain the approximated projected UFCF is to use the consensus estimation for essential financials from the financial analysts. The unlevered free cash flow can be approached by the formula:

Revenue-COGS-SG&A-D&A-Tax=EBIAT,
EBIAT+D&A-Cap Exp- 4change in NWC=Unlevered Free Cash Flow

We calculate the unlevered free cash flow together with the tax shield each year in the projection period from 2022 to 2027 (Table 3).

After we have the projected Cash Flow and tax shield, the discount rate of both cash flow and tax shield must be figured out to discount the cash flow the present value.

▪ Cost of capital on unlevered firm

Assumption for private firm, the unlever beta will be calculated by unlevering peers' equity betas. For public firm, we could otherwise calculate the unlevered beta based on firm's public information. We assume 1) maximum tax advantage to debt (which means that the tax shield will appear on the asset side of balance sheet) and that firm will maintain constant debt level in the future (which will help to simplify the final formula); 2) the risk of tax shield will be equal to debt, which means that tax shield will be discounted by the cost of debt. Under those two assumptions, the corresponding formula to unlever levered beta is:

$$\beta_u = \frac{E}{V_L - D \times T_c}\beta_e + \frac{D(1-T_c)}{V_L - D \times T_c}\beta_d$$

We need following inputs:

Beta of equity beta of equity measures the co-movement between equity return and market return. We use historical beta to approximate the future beta. Historical beta will be obtained by running the following regression with the firm's stock return on right-hand side and the return on Swiss Market Index on the left-hand side:

$$r_i = \alpha_i + \beta_i r_m + \epsilon_i$$

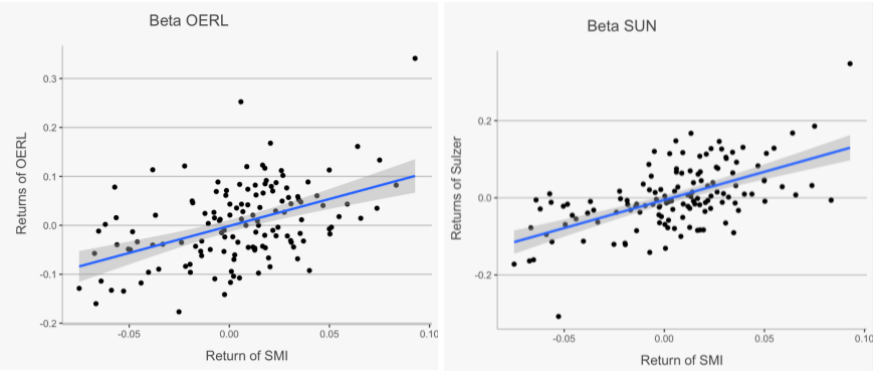

Figure 3: Beta for OERL (1.48) and SUN (2)

The return is monthly return and time period covered is last five year. Unsurprisingly, both firms' equity betas are above 1.4, which reflects that industrial companies move collectively with market and are very sensitive to business cycle.

Beta of debt Reformulating CAPM a bit, we could back out the formula for estimating beta of debt. We will approximate r_d with firm's outstanding bond yield. Since the firms we consider here have reasonably high bond ratings with the default rate negligible, the risk reflected by yield spread could well approximate the systematic risk.

$$\beta_d = \frac{r_d - r_f}{r_m - r_f}$$

"Equity asset ratio" and "debt asset ratio" Calculated from nearest financial statement.

With all the input, we get the unlevered betas for both firms. We apply CAPM to calculate cost of capital on unlevered firm. With aforementioned assumptions, the applied CAPM is:

$$r_u = r_f + \beta_u [r_m - r_f]$$

Risk-free rate and market risk premium We will use the latest U.S risk-free rate and U.S market risk premium from Kroll (formally Duff & Phelps)[1]. Kroll will periodically reassess equity risk premium and risk-free rate in each market, and those numbers are forward-looking and widely used in practice.

We provide two reasons for why we use US numbers: first, our target firms belong to industries with market footprint around the world. So, the risk-free rate and market risk premium should reflect such global operating risk. Since the U.S is the world's largest capital market, we think the return investors require in the US market could well represent the global market. Second, when we calculate the historical market risk premium in the Swiss market for the last thirty years, we find the result is -1.4%, which we think is unreasonable to use in our valuation. This might be for safe haven statue of Swiss market or simply we need longer period dataset.

- **Discounted rate of tax shield**

Viewing the historical debt asset ratio reflect that both firms did not follow a constant debt asset ratio policy, hence it is inappropriate to assume tax shield will co-move with asset. So, here we

[1] https://www.kroll.com/en/insights/publications/cost-of-capital

assume that the risk of debt will be equal to that of debt, and thus future tax shield will be discounted by the cost of debt.

With above calculation process explanation, we list the input and final results in below table 4. And applying corresponding discounted rates, we will get the cumulative present value of free cash flow and tax shield.

A sidenote for mid-year convention: As we implement our valuation in the mid of 2022, we will discount the free cash flow in 2022 by 1/ (1+discount rate)$^{0.5}$, and so on and so forth for other future cash flow. This will ensure the consistence of present value.

Cost of capital on unlevered firm

Assumption: Maximum debt advantage; risk of tax sheild equal to debt

$$\beta_u = \frac{E}{V_L - D \times T_c}\beta_e + \frac{D(1-T_c)}{V_L - D \times T_c}\beta_d$$

Beta of unlevered firm	**1.21**
Beta of equity	1.48
From Monthly regresion on SMI return	
Beta of debt	0.32
Spread of debt	1.78%
Debt Rating	BBB+
Firm tax rate	25.00%
Equity asset ratio	0.76
Debt asset ratio	0.24
Market Capitalization	2315.4
Number of share	340
Current price	CHF 6.81
Debt	960
Short Term Debt	168
Long Term Debt	792

$$\beta_d = \frac{r_d - r_f}{r_m - r_f}$$

$$r_u = r_f + \beta_u[r_m - r_f]$$

All equity finance cost of equity	9.63%
risk free rate	3.00%
market risk premium	5.50%

Discounted rate of tax sheild

Assumption: risk of tax sheild equal to debt

$$r_u = r_f + \beta_u[r_m - r_f]$$

Cost of debt	4.78%
beta of debt	0.32
risk free rate	3.00%
market risk premium	5.50%

Table 4: Calculation of Cost of capital on unlevered firm and Discounted rate of tax shield for OC Oerlikon

The next step is to estimate the terminal value of both Unlevered Free Cash Flow and Tax Shield. We implement Gordon growth model to calculate terminal value. The input growth rate in Gordon growth model is 2%, which could be either argued through long term inflation rate and GDP growth rate. We will also vary this parameter in later sensitivity analysis to see the value range implied by this parameter.

Unlevered Firm Value

Mid-year Convention Y	Historical Period			CAGR	*Current*	Projection Period						CAGR
	2018	2019	2020	('18 - '20)	2021	2022	2023	2024	2025	2026	2027	('22 - '26)
Sales					2649	2849	2951	3030	3042	3082	3243	2.62%
% growth					*6%*	*8%*	*4%*	*3%*	*0%*	*1%*	*5%*	
Less: Cost of Goods Sold					1903	2007	2065	2108	2130	2311	2400	
Gross Profit					746	842	886	922	912	771	843	0.02%
% margin					*28%*	*30%*	*30%*	*30%*	*30%*	*25%*	*26%*	
Less: SG&A					302	356	383	397	381	214	159	
EBITDA					444	486	503	525	531	557	684	7.07%
% margin					*17%*	*17%*	*17%*	*17%*	*17%*	*18%*	*21%*	
Less: Depreciation & Amortization					216	224	221	232	224	496	522	
EBIT					228	262	282	293	307	61	162	
% margin					*9%*	*9%*	*10%*	*10%*	*10%*	*2%*	*5%*	
Tax					57	79	80	83	89	17	47	
Estimated Tax Rate(%)					*25%*	*30%*	*28%*	*28%*	*29%*	*28%*	*29%*	
EBIAT					171	183	202	210	218	44	115	
Plus: Depreciation & Amortization					216	224	221	232	224	496	522	
Less: Capital Expenditures					83	129	146	149	127	121	110	
Less: Inc./(Dec.) in Net Working Capital					-6	-105	-80	-159	-108	-95	-118	
Unlevered Free Cash Flow					310	383	357	452	423	514	645	10.99%
All equity finance cost of equity	9.63%											
Discount Period						0.5	1.5	2.5	3.5	4.5	5.5	
Discount Factor						0.96	0.87	0.79	0.72	0.66	0.60	
Present Value of Free Cash Flow						365.79	311.00	359.17	306.60	339.83	388.97	
Cumulative Present Value of Free Cash Flow					2071.36							

Tax Sheild

Interest payment					15.00	13.56	16.41	16.24	13.00	15.00	14.87	
Tax rate					*25%*	*30%*	*28%*	*28%*	*29%*	*28%*	*29%*	
Tax Sheild					3.75	4.07	4.59	4.55	3.77	4.20	4.31	
Discounted rate of tax sheild	4.78%											
Discount Period						0.5	1.5	2.5	3.5	4.5	5.5	
Discount Factor						0.98	0.93	0.89	0.85	0.81	0.77	
Present Value of Tax sheild						3.97	4.28	4.05	3.20	3.40	3.34	
Cumulative Present Value of Tax sheild					22.25							

Table 3: Projection period for cash flow and tax shield for OC Oerlikon

Terminal Value of unlevered firm	
Assumption	
Cash flow growth rate	2%
$\frac{PV(yr\ 7\ cf)(1+g)}{r-g}$	
Terminal Value of unlevered CF	8620.96
All equity finance cost of equity	9.63%
Terminal year cash flow	645
PV of TV unlevered firm	5198.92

Terminal Value of Tax shield	
Assumption	
Tax shield growth rate	2%
$\frac{PV(yr\ 7\ cf)(1+g)}{r-g}$	
Terminal Value of Tax shield	158.20
Discounted rate of tax sheild	4.78%
Terminal year Tax shield	4.31
Present Value of TV Tax Shield	122.37

Table 5: Terminal value: unlevered firm and Tax shield for OERL

As usually terminal value will take up a large part of final enterprise value[2], we will cross-validate the result from *Gordon growth model* by *exit multiple method*. Because both Gordon growth model and exit multiple method could lead to a terminal value, we could backout the other key parameter from one to another. In particularly, here we could back out the *implied EV/EBITDA* in exit multiple method from the growth rate in Gordon growth model. If the implied EV/EBITDA at terminal date is close to current multiple, then we could be convinced that the estimated terminal value is reasonable.

Implied Exit Multiple	
Terminal Year Enterprice Value	CHF 8'779.16
of unlevered firm	8620.96
of tax sheild	158.20
$\frac{FCF_t}{r-g} = TerminalValue = EV/EBITDA_t \times EBITDA_t$	
* where t is terminal date	
Terminal Year EBITDA	684
Implied EV/EBITDA	12.84x

Table 6: Terminal value: Implied EV/EBITDA for OERL

Table 6, the implied EV/EBITDA is 12.84x for OERL, which is near the median multiple from comparables firm, 8.49x, as will be shown later. This means that the assuming 2% growth rate is consistent with current market valuation.

Implied EV/EBITDA	
Enterprise Value	CHF 7'414.90
LTM EBITDA	444
Implied EV/EBITDA	16.70x

Table 7: DCF Implied EV/EBITDA for OERL

The final step of DCF is adding all parts together to get enterprise value. To link the result from DCF to multiple method, we also calculate the implied EV/EBITDA from the DCF result. In table 7, for

[2] In our case, terminal value will take up 70% enterprise value for OC Oerlikon and 61% for Sulzer.

OERL, the implied EV/EBITDA is 16.7x, which is 8x higher than median the EV/EBITDA from comparables, 8.49x. This could either indicate that the current market value largely deviates from intrinsic value *or* DCF might miss some information that current market is considering.

Enterprise Value	
Cumulative Present Value	CHF 2'093.60
Cumulative Present Value of FCF	2071.36
Cumulative Present Value of TS	22.25
Present Value of Terminal Value	CHF 5'321.29
of unlevered firm	CHF 5'198.92
of Tax shield	122.37
% of Enterprise Value	70%
Enterprise Value (APV)	CHF 7'414.90

Implied Equity Value and Share Price	
Enterprise Value	CHF 7'414.90
Less: Total Debt	960.00
Less: Preferred Stock	0.00
Less: Noncontrolling Interest	55.00
Plus: Cash and Cash Equivalents	619.00
Implied Equity Value	CHF 7'018.90
Diluted Weighted Avg. Shares	326.87
Implied Share Price	CHF 21.47

Table 8: Calculation of enterprise value OC

Enterprise value, less debt claims and plus cash and cash equivalents, is equity value.

The number of outstanding shares here we take is the number of diluted weighted average shares. It will equally weight the fully diluted outstanding shares from quarterly reports and also assume all option-alike claim will be exercised in each quarter. This will deflate final estimated share price, as we ignore the proceeding from exercising those claims and the fact that only profitable in-the-moneyness claim will be exercised. However, as revealed in recent financial report, there is only few option-alike claim outstanding.

Finally, we do a sensitivity analysis by varying the key parameters (all equity financed cost of equity and terminal year cash flow growth rate) to see the share price range.

Implied Share Price					
	Cash flow growth rate				
All equity finance cost of equity / CHF 21.47	1.0%	1.5%	2.0%	2.5%	3.0%
8.63%	CHF 22.31	CHF 23.56	CHF 25.00	CHF 26.67	CHF 28.64
9.13%	CHF 20.81	CHF 21.89	CHF 23.11	CHF 24.52	CHF 26.16
9.63%	CHF 19.49	CHF 20.42	CHF 21.47	CHF 22.67	CHF 24.05
10.13%	CHF 18.32	CHF 19.13	CHF 20.04	CHF 21.07	CHF 22.24
10.63%	CHF 17.27	CHF 17.98	CHF 18.77	CHF 19.67	CHF 20.68

Table 9: Sensitivity Analysis OERL

▪ Multiples

We try to ensure the comparability through two insurances: one is the automatical selection from Bloomberg whose selection criterion is based on business line; the other one is through clustering and anomaly detection algorithm in machine learning practice.[3]

First, through Bloomberg, we access the set of comps based the business line target companies operate in. we also access the financials which reflect performance drivers in this step.

[3] Kexing Ding, Xuan Peng, Yunsen Wang; A Machine Learning-Based Peer Selection Method with Financial Ratios. *Accounting Horizons* 1 September 2019; 33 (3): 75–87. doi: https://doi.org/10.2308/acch-52454

Second, we implement both clustering algorithm *Gaussian mixture model* and anomaly detection algorithm *Isolation Forest* to further shrink the set of comps conditional on comparability. The applied dataset includes variables such as business risk, financial statistics, profitability margin, growth rate, return on investment, leverage ratio and coverage ratio.

- *Gaussian mixture model* is generalized k-means cluster. Based on input features, it will cluster data point into preset number of clusters. We set the number of clusters to 2, then we feed the comps dataset, which includes our target company, into model. The idea behind is that, for those comps belong to the same cluster as target will be regarded as comparable comps, and otherwise will be taken as not comparable, hence excluded from comps set.

- *Isolation Forest* is an anomaly detection algorithm. It will first run a random forest algorithm on the dataset. Usually, outlier or anomaly will be easily spotted out in shorter steps compared with normal data point. Therefore, based on some measure of how many steps we need to sort out each data point, we could detect outlier with shorter path from dataset. The motivation is following: As companies which are not comparable will be identified as outlier in Isolation Forest, we could in the end left with those comparables.

The final comps set will take the intersection set of output of above two algorithms.

Whole Firms

	Risk	Profitability		Growth				LT Leverage Ratios			Interest Coverage		Investment Return			Yield		COMPS
Name	Beta 5Y	EBITDA argin (to Sales)	EBIT argin (to sales)	Sales Growth LT	Trailing 12 EBITDA Growth	EPS Growth	EPS Yr Growth	Debt/Equity	Debt/EBITDA	Net Debt to EBITDA	EBITDA/Int Exp	EBIT/Int Exp	ROIC	ROE	ROA	Dvidend Yield	FCF Yld	Yes=1
SULZER AG-REG	1.55	12.36%	7.03%	6.32%	9.14%	105.00%	105.00%	124.98%	4.1	0.15	8.09	4.6	6.65%	13.88%	3.58%	5.17%	7.82%	1
INDUTRADE AB	1.19	17.90%	13.03%	18.45%	29.90%	25.22%	25.22%	64.05%	1.7	1.3	38.5	28.02	13.55%	22.86%	10.82%	1.06%	2.49%	1
FISCHER (GEORG)-RE	1.13	11.07%	7.47%	16.90%	39.73%	86.37%	86.37%	56.75%	2.06	-0.23	18.73	12.64	9.20%	15.27%	5.98%	1.91%	2.75%	1
II PLC	1.13	18.76%	13.42%	2.25%	5.34%	17.22%	17.22%	92.08%	2.05	1.54	24.14	17.28	18.37%	34.11%	13.05%	1.75%	4.31%	1
KSB SE & CO KGAA	0.88	7.70%	3.18%	6.15%	18.44%	--	--	8.58%	0.35	-2.11	14.48	5.97	-0.04%	-1.88%	-0.51%	2.03%	20.70%	1
CHR HANSEN HOLDIN	1	35.02%	25.64%	13.00%	2.07%	-14.20%	-14.20%	58.62%	2.53	2.24	18.5	13.54	9.13%	17.25%	7.28%	1.27%	1.70%	0
ATLAS COPCO AB-A S	1.11	25.67%	20.86%	14.17%	21.34%	22.45%	22.45%	36.78%	0.87	0.18	79.51	64.61	20.47%	30.21%	14.60%	7.19%	2.77%	1
IERYS SA	1.31	16.82%	8.77%	15.39%	15.46%	664.86%	664.86%	62.87%	2.76	1.8	18.25	9.52	6.09%	9.58%	4.05%	4.52%	6.73%	1
BURCKHARDT COPR	1.26	12.40%	9.19%	-2.58%	-2.97%	35.98%	35.98%	71.86%	1.93	1.01	24.94	18.49	10.66%	17.88%	5.24%	1.38%	10.76%	1
UCORE	0.97	4.82%	3.65%	16.15%	70.61%	375.93%	375.93%	68.04%	1.86	0.8	17.97	13.63	13.98%	22.90%	7.47%	1.91%	9.72%	1
PFEIFFER VACUU TE	0.7	15.35%	11.96%	21.11%	51.85%	96.25%	96.25%	3.95%	0.15	-0.6	140.43	109.47	16.15%	17.39%	10.81%	2.72%	2.34%	1

Business line 1: flow con

Name	Beta 5Y	EBITDA argin (to Sales)	EBIT argin (to sales)	Sales Growth LT	Trailing 12 EBITDA Growth	EPS Growth	EPS Yr Growth	Debt/Equity	Debt/EBITDA	Net Debt to EBITDA	EBITDA/Int Exp	EBIT/Int Exp	ROIC	ROE	ROA	Dvidend Yield	FCF Yld	Yes=1
SULZER AG-REG	1.55	12.36%	7.03%	6.32%	9.14%	105.00%	105.00%	124.98%	4.1	0.15	8.09	4.6	6.65%	13.88%	3.58%	5.16%	7.82%	1
PFEIFFER VACUU TE	0.7	15.35%	11.96%	21.11%	51.85%	96.25%	96.25%	3.95%	0.15	-0.6	140.43	109.47	16.15%	17.39%	10.81%	2.72%	2.34%	1
AALBERTS NV	1.33	23.70%	16.99%	14.12%	40.84%	207.55%	207.55%	25.86%	0.8	0.92	43.86	31.43	9.67%	11.77%	6.68%	2.17%	2.28%	1
KSB SE & CO KGAA	0.88	7.70%	3.18%	6.15%	18.44%	--	--	8.58%	0.35	-2.11	14.48	5.97	-0.04%	-1.88%	-0.51%	2.03%	20.70%	1
INTERPUP GROUP S	0.92	23.51%	18.39%	29.52%	32.22%	15.04%	15.04%	63.00%	2.24	1.33	88.83	69.49	10.47%	15.64%	7.84%	0.68%	2.26%	1
INDUTRADE AB	1.19	17.90%	13.03%	18.45%	29.90%	25.22%	25.22%	64.05%	1.7	1.3	38.5	28.02	13.55%	22.86%	10.82%	1.06%	2.49%	0
ROTORK PLC	1.11	23.20%	18.57%	-5.85%	-8.55%	-6.12%	-6.12%	1.75%	0.07	-0.78	161.42	129.23	15.89%	16.43%	12.79%	2.40%	2.33%	1
II PLC	1.13	18.76%	13.42%	2.25%	5.34%	17.22%	17.22%	92.08%	2.05	1.54	24.14	17.28	18.37%	34.11%	13.05%	1.74%	4.31%	1
ATLAS COPCO AB-A S	1.11	25.67%	20.86%	14.17%	21.34%	22.45%	22.45%	36.78%	0.87	0.18	79.51	64.61	20.47%	30.21%	14.60%	7.15%	2.77%	1
BURCKHARDT COPR	1.26	12.40%	9.19%	-2.58%	-2.97%	35.98%	35.98%	71.86%	1.93	1.01	24.94	18.49	10.66%	17.88%	5.24%	1.37%	10.76%	1
FISCHER (GEORG)-RE	1.13	11.07%	7.47%	16.90%	39.73%	86.37%	86.37%	56.75%	2.06	-0.23	18.73	12.64	9.20%	15.27%	5.98%	1.90%	2.75%	1

Table 10: Selected comps set

After decided the final comps set, we take the median, average, minimum and maximum EV/EBITDA and P/E both for trailing twelve-month (TTM) and forward (Fwd) term. Then, we access related Earning and EBITDA from 2021 financial year's financial report to calculate corresponding equity value and enterprise value.

A sidenote for adjustment for Earning: Sulzer in 2021 finish their spinoff applicator systems division, and gain income from discontinuous operation by 1278.3 MM. We exclude this to reflect the normal operation income.

Implied Equity Value and Share Price (Fwd)				
	Min	Median	Average	Max
Metric	444	444	444	444
EV/EBITDA (Fwd)	1.75x	8.39x	9.16x	21.02x
Enterprise Value	CHF 777.29	CHF 3'724.89	CHF 4'069.12	CHF 9'331.22
Less: Total Debt	960.00	960.00	960.00	960.00
Less: Preferred Stock	0.00	0.00	0.00	0.00
Less: Noncontrolling Interest	45.00	45.00	45.00	45.00
Plus: Cash and Cash Equivalent	619.00	619.00	619.00	619.00
Implied Equity Value	-CHF 846.71	CHF 2'100.89	CHF 2'445.12	CHF 7'707.22
Diluted Weighted Avg. Shares	326.87	326.87	326.87	326.87
Implied Share Price	-CHF 2.59	CHF 6.43	CHF 7.48	CHF 23.58

Implied Equity Value and Share Price (Fwd)				
	Min	Median	Average	Max
Metric	175.2	175.2	175.2	175.2
P/E (Fwd)	5.28x	11.60x	13.09x	27.24x
Implied Equity Value	CHF 925.06	CHF 2'031.44	CHF 2'293.89	CHF 4'772.45
Diluted Weighted Avg. Shares	326.87	326.87	326.87	326.87
Implied Share Price	CHF 2.83	CHF 6.21	CHF 7.02	CHF 14.60

Table 11: OC EV/EBITDA and P/E forward

5. In Conclusion

Our results derived from different valuation methods are shown on the below figure.

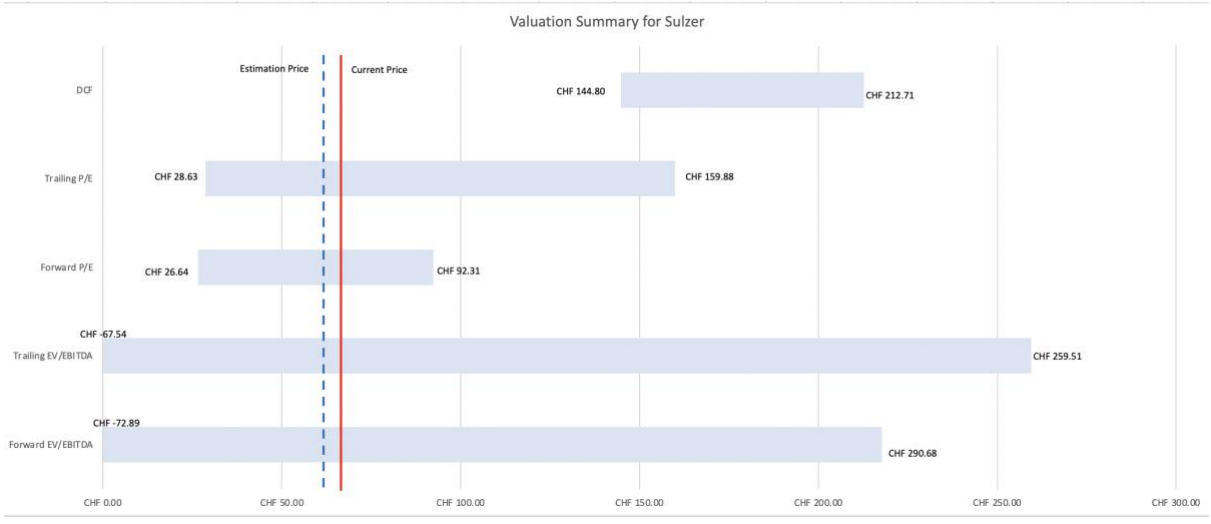

Figure 4: valuation range for SUN

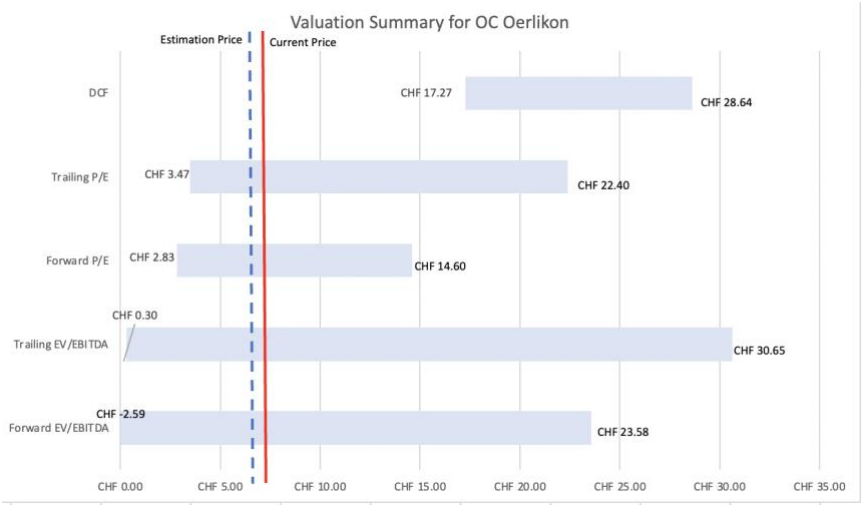

Figure 5: valuation range for OERL

DCF method gives the considerably highest estimation comparing the multiples method. This can be accredited to the difference of market valuation (multiples valuation) and intrinsic valuation (DCF). In multiples valuation, the price already reflected the trading information and even other non-economic factors[4]. Although this may not impact the companies' business operation, but capital market is concerned with the secondary market risk.

Also, with some irrational trading, lower the share price in the market. However, this effect cannot be captured in DCF method. We took a step to reconsider our task, as we are doing a kind of valuation, focus on the market itself rather than intrinsic value will give us more accuracy in this turbulent time. This is the reason why we put our sight more on the multiples method to deliver the final estimation.

In multiples method, we have two multiples on the line, they are EV/EBITDA and P/E respectively. In combination of trailing and forward calibration, we have four numbers for multiples in total. To determine which multiples would be better capture the value, we investigate the capital structure first for both firms. And we find that both companies are fluctuated in the last 5 years, which make P/E unlovely in our valuation. we pick the EV/EBITDA as our final multiple to conduct the valuation. This valuation focuses more on the future potentials; therefore, a forward-looking calibration will meet our target more accurate. Our final valuation for OERL is 6.41 CHF, overpricing the current price 6.81 CHF and 63.92 CHF for SUN, also overpricing the current price 71.1 CHF.

[4] NZZ report: Schweizer Firmen sind mit Vekselberg in der Schmuddelecke gefangen

Appendix:

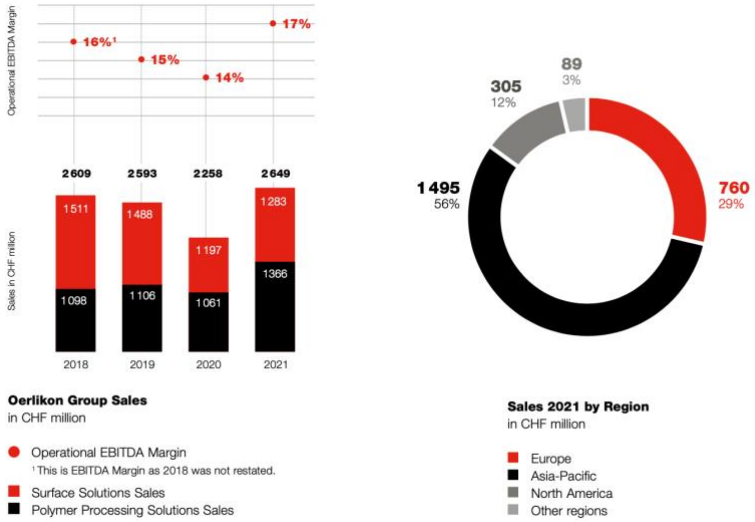

Figure 1: glance of product and operation region for OREL

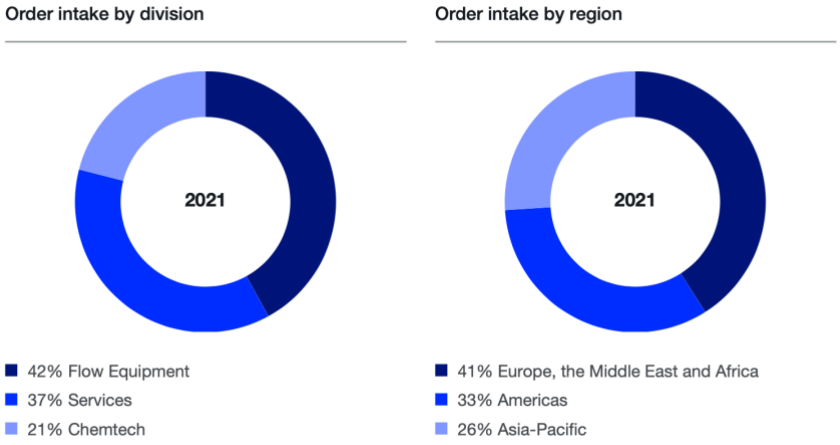

Figure 2: glance of product and operation region for OREL

Cost of capital on unlevered firm

Assumption — Maximum debt advantage; risk of tax sheild equal to debt

$$\beta_u = \frac{E}{V_L - D \times T_c}\beta_e + \frac{D(1-T_c)}{V_L - D \times T_c}\beta_d$$

Beta of unlevered firm	**1.41**
**public firm, comparables is itself	
Beta of equity	2.00
From Monthly regresion on SMI return	
Beta of debt	0.25
Spread of debt	1.35%
Debt Rating	BBB
Firm tax rate	25.00%
Equity asset ratio	0.66
Debt asset ratio	0.34
Market Capitalization	2380.44
Number of share	33.2
Current price	CHF 71.70
Debt	1598.9
Short Term Debt	369.8
Long Term Debt	1229.1

$$\beta_d = \frac{r_d - r_f}{r_m - r_f}$$

$$r_u = r_f + \beta_u [r_m - r_f]$$

All equity finance cost of equity	10.77%
risk free rate	3.00%
market risk premium	5.50%
**US forward looking	

Discounted rate of tax sheild

Assumption — risk of tax sheild equal to debt

$$r_u = r_f + \beta_u [r_m - r_f]$$

Cost of debt	4.35%
beta of debt	0.25
risk free rate	3.00%
market risk premium	5.50%

Table 1: Calculation of Cost of capital on unlevered firm and Discounted rate of tax shield for SUN

Terminal Value of unlevered firm

Assumption

Cash flow growth rate	2%

$$\frac{PV(yr\ 7\ cf)(1+g)}{r\text{-}g}$$

Terminal Value of unlevered firm	6433.72
All equity finance cost of equity	10.77%
Terminal year cash flow	553
PV of TV unlevered firm	3666.06

Terminal Value of Tax shield

Assumption

Tax shield growth rate	2%

$$\frac{PV(yr\ 7\ cf)(1+g)}{r\text{-}g}$$

Terminal Value of Tax shield	78.69
Discounted rate of tax sheild	4.35%
Terminal year Tax shield	1.81
Present Value of TV Tax Shield	62.26

Implied Exit Multiple

Terminal Year Enterprice Value	CHF 6'512.41
of unlevered firm	6433.72
of tax sheild	78.69
Terminal Year EBITDA	532
Implied EV/EBITDA	12.24x

Table 2: Terminal value: unlevered firm and Tax shield for SUN Implied EV/EBITDA for SUN

Enterprise Value	
Cumulative Present Value	CHF 2'248.38
Cumulative Present Value of FCF	2233.76
Cumulative Present Value of TS	14.62
Present Value of Terminal Value	CHF 3'728.32
of unlevered firm	CHF 3'666.06
of Tax shield	62.26
% of Enterprise Value	61%
Enterprise Value (APV)	CHF 5'976.70

Implied Equity Value and Share Price	
Enterprise Value	CHF 5'976.70
Less: Total Debt	1598.90
Less: Preferred Stock	0.00
Less: Noncontrolling Interes	5.50
Plus: Cash and Cash Equival	1532.10
Implied Equity Value	CHF 5'904.40
Diluted Weighted Avg. Shares	34.5
Implied Share Price	CHF 171.14

Implied EV/EBITDA	
Enterprise Value	CHF 5'976.70
LTM EBITDA	443
Implied EV/EBITDA	13.49x

Table 3: Calculation of enterprise value SUN;DCF Implied EV/EBITDA for SUN

Implied Share Price					
	Cash flow growth rate				
All equity finance cost of equity	CHF 171.14	1.00%	1.50%	2.00%	2.50%	3.00%
	9.77%	177.18	184.45	192.66	201.99	212.71
	10.27%	167.77	174.13	181.25	189.29	198.43
	10.77%	159.33	164.92	CHF 171.14	178.12	186.00
	11.27%	151.71	156.65	162.13	168.23	175.07
	11.77%	144.80	149.19	154.03	159.40	165.38

Table 4: Sensitivity Analysis SUN

Implied Equity Value and Share Price (Fwd)				
	Min	Median	Average	Max
Metric	443	443	443	443
EV/EBITDA (Fwd)	1.40x	12.06x	12.34x	24.04x
Enterprise Value	CHF 621.91	CHF 5'341.83	CHF 5'468.16	CHF 10'650.47
Less: Total Debt	1598.90	1598.90	1598.90	1598.90
Less: Preferred Stock	0.00	0.00	0.00	0.00
Less: Noncontrolling Interest	5.50	5.50	5.50	5.50
Plus: Cash and Cash Equivale	1532.10	1532.10	1532.10	1532.10
Implied Equity Value	-CHF 2'514.59	CHF 2'205.33	CHF 2'331.66	CHF 7'513.97
Diluted Weighted Avg Shares	34.5	34.5	34.5	34.5
Implied Share Price	-CHF 72.89	CHF 63.92	CHF 67.58	CHF 217.80

Implied Equity Value and Share Price (Fwd)				
	Min	Median	Average	Max
Metric*	114.60	114.60	114.60	114.60
P/E (Fwd)	8.02x	17.31x	16.21x	27.79x
Implied Equity Value	CHF 919.09	CHF 1'983.73	CHF 1'857.24	CHF 3'184.73
Diluted Weighted Avg Shares	34.5	34.5	34.5	34.5
Implied Share Price	CHF 26.64	CHF 57.50	CHF 53.83	CHF 92.31

*using net income from continue operation. Excludinginfluence of spinoff

Table 5: OC EV/EBITDA and P/E forward

Unlevered Firm Value

Mid-year Convention	Y	Historical Period			CAGR	*Current*	Projection Period						CAGR
		2018	2019	2020	('18 - '20)	2021	2022	2023	2024	2025	2026	2027	('22 - '26)
Sales						3155	3284	3413	3540	3742	3906	4074	4.41%
% growth						*6%*	*4%*	*4%*	*4%*	*6%*	*4%*	*4%*	
Less: Cost of Goods Sold						2208	2276	2364	2446	2585	2698	2814	
Gross Profit						947	1008	1049	1094	1157	1208	1260	4.56%
% margin						*30%*	*31%*	*31%*	*31%*	*31%*	*31%*	*31%*	
Less: SG&A						504	594	613	633	669	699	728	
EBITDA						443	414	436	461	488	509	532	5.14%
% margin						*14%*	*13%*	*13%*	*13%*	*13%*	*13%*	*13%*	
Less: Depreciation & Amortization						168	132	133	141	149	155	162	
EBIT						275	282	303	320	339	354	370	
% margin						*9%*	*9%*	*9%*	*9%*	*9%*	*9%*	*9%*	
Tax						69	72	77	81	86	90	94	
Estimated Tax Rate(%)						*25%*	*26%*	*25%*	*25%*	*25%*	*25%*	*25%*	
EBIAT						206	210	226	239	253	264	276	
Plus: Depreciation & Amortization						168	132	133	141	149	155	162	
Less: Capital Expenditures						79	82	86	94	120	125	131	
Less: Inc./(Dec.) in Net Working Capital						-451	-174	-225	-190	-207	-290	-246	
Unlevered Free Cash Flow						746	434	498	476	489	584	553	4.97%
All equity finance cost of equity		10.77%											
Discount Period							0.5	1.5	2.5	3.5	4.5	5.5	
Discount Factor							0.95	0.86	0.77	0.70	0.63	0.57	
Present Value of Free Cash Flow							412.37	427.18	368.62	341.88	368.61	315.11	
Cumulative Present Value of Free Cash Flow						2233.76							

Tax Sheild

Interest payment						24.60	14.97	12.94	11.20	9.69	8.38	7.25	
Tax rate							*26%*	*25%*	*25%*	*25%*	*25%*	*25%*	
Tax Sheild						0.00	3.89	3.24	2.80	2.42	2.10	1.81	
Discounted rate of tax sheild		4.35%											
Discount Period							0.5	1.5	2.5	3.5	4.5	5.5	
Discount Factor							0.98	0.94	0.90	0.86	0.83	0.79	
Present Value of Tax sheild							3.81	3.04	2.52	2.09	1.73	1.43	
Cumulative Present Value of Tax sheild						14.62							

Table 6: Projection period for cash flow and tax shield for SUN