ECONOMIC SITUATION AND STRATEGY September 7, 2018

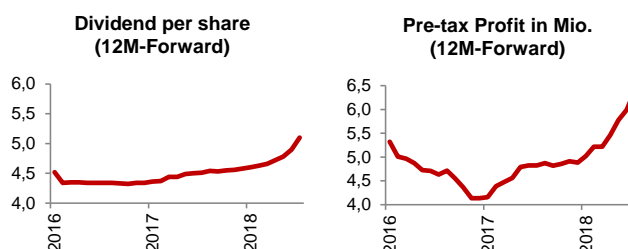## How to profit from disruptive enterprises, part II

Two weeks ago, in part I of this series on "disruption," we focused on how to identify enterprises at the beginning of disruptive processes. We concluded that "classic" methods based on expert knowledge soon encounter their limits because individual persons are unable to judge such complex processes. It is not just a matter of recognizing the disruptive "facts" as such, but also of correctly assessing the related entrepreneurial and valuation potential. By definition, disruptive processes are distinguished by the fact that they cannot be evaluated using standard processes, since new ground is broken to a certain extent with each entrepreneurial disruption, so even deep knowledge of specific enterprise structures seems to have only limited informative value.

We therefore rely on a different strategy. Instead of trying to "divine" the future, it seems more reasonable for us to identify companies that already show some signs of disruptive behavior. To this end, we use statistical methods to identify patterns in time-series of fundamental data typical of disruptive companies in their early stages. That means using a disruptive data processing approach to identify stocks with disruptive entrepreneurial potential. But how does it work in detail?
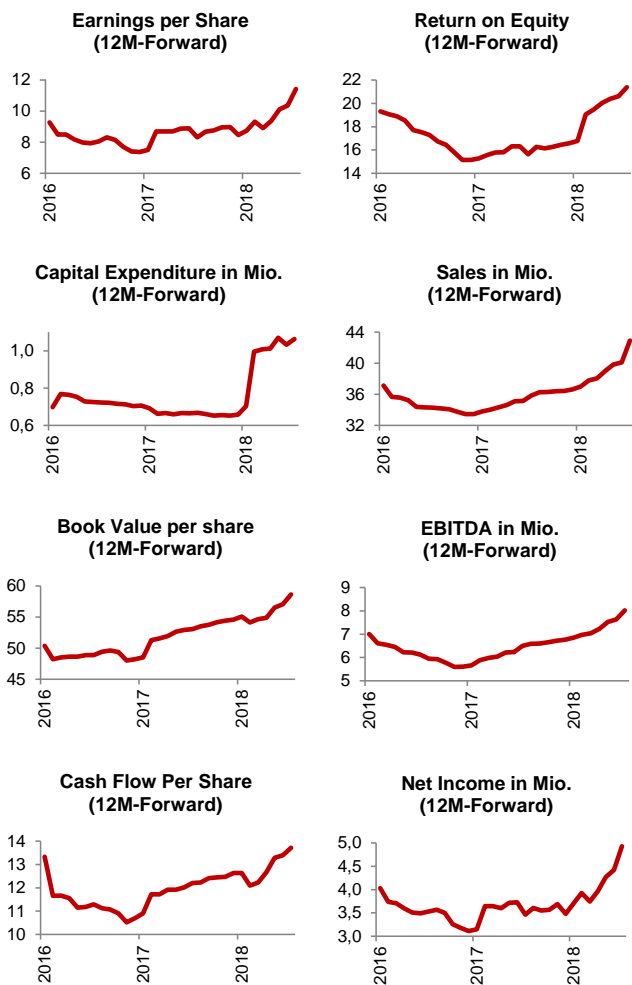
In a first step, we analyze companies that can be reliably described from today's perspective as having gone through disruptive processes. We have noticed that to a certain extent all these companies exhibit a similar pattern in estimates of key figures. However, it is not a matter of the level of those figures, but rather their changes over time. At some point in time, all these companies have experienced a certain structural break in the trend of a key figure. Evidently, there is a mo-

ment where company-specific facts and knowledge about disruptive changes "diffuse" into the market and convince a growing number of analysts to adjust their estimates. Our analysis focuses primarily on the estimates of earnings, cash flow, sales, capital expenditures, return, and book value. We have determined that companies with a disruptive character or disruptive entrepreneurial processes typically exhibit two types of trends in respect to key figures. The one consists in the fact that there is an upward jump discontinuity relative to a preceding trend in the estimation of a key figure (and that trend may well be negative). Evidently, something "happened" there that cast the company in a new light in analysts' collective perception. The other is that the trend of key figures corresponds to a non-linear, upwardly bent line that steepens increasingly at the end. A company that now typifies this is Alfa Laval. It is a manufacturer of products for materials separation and heat exchange and of innovative tank cleaning systems and ballast water treatment plants.

Analyst estimates for Alfa Laval:

Dividend per share (12M-Forward)

Pre-tax Profit in Mio. (12M-Forward)

Earnings per Share (12M-Forward)

Return on Equity (12M-Forward)

Capital Expenditure in Mio. (12M-Forward)

Sales in Mio. (12M-Forward)

Book Value per share (12M-Forward)

EBITDA in Mio. (12M-Forward)

Cash Flow Per Share (12M-Forward)

Net Income in Mio. (12M-Forward)

In respect to nearly all the key figures on which we focus, the company exhibits the typical features in the trend of key figures that may also be found in many other disruptive companies. What is already "optically" discernible in the case of Alfa Laval may be systematized and verified statistically. After all, there is not much point if a portfolio manager has to analyze 10 key figures every week for each of the 1,800 companies in the DJ Global STOXX index, for example. That would result in 18,000 trendlines, each with a higher number of data points, so that hundreds of thousands of data points would have to be examined regularly for typical trend patterns. That is a nearly impossible task for a human being, but a challenge practically made for a computer. The only prerequisite is that the computer must know what to pay attention to. To that end, we have defined a set of statistical criteria with which the desired trend patterns can be identified very accurately.

Of course, this is only the first step. The preferred trend patterns in the estimation of key figures sometimes also appear in companies that initially have little to do with disruption. A good example is a company that has sold a very successful subsidiary to a private equity firm.

Windfall profits may be realized that perhaps have something to do with entrepreneurial luck, but in very few cases anything to do with disruption. For that reason, it is critically important that our process "sort out" companies that come up positive on statistical analysis, but on closer examination very clearly fall into the category of "realized windfall profits." As for the remaining companies, the question is how long they should be held in a portfolio. In principle, there is much reason to hold them for a relatively long time, since disruptive processes need time to unfold. We have therefore opted for a portfolio design mechanism that leads to longer holding of the stocks on average, e.g. for over a year, but is also still able to sell them quickly if the fundamental situation worsens abruptly (discernible from a strong reversal in the trend of the estimates). Now, one could rightly object at this point that such an approach does not sound promising because markets are efficient and will notice when a stock exhibits trend patterns as in Alfa Laval's example. That would necessarily lead to positive price movements, and those would price in the observed effect and limit outperformance potential. However, according to our observations, it is not priced in that a positive fundamental trend can continue for an extremely long time after such disruptions – and that is exactly what drives the outperformance that can be achieved on our approach compared with approaches weighted according to market capitalization.

Weekly outlook for Sept. 10-14, 2018

	Apr.	May	June	July	Aug.	Sept.	Release
DE: ZEW economic expectations	-8.2	-8.2	-16.1	-24.7	-13.7	-10.9	Sept. 11
DE: ZEW current conditions	87.9	87.4	80.6	72.4	72.6	72.9	Sept. 11
DE: Consumer prices, m/m - final	0.0%	0.5%	0.1%	0.3%	0.1%		Sept. 13
DE: Consumer prices, y/y- final	1.6%	2.2%	2.1%	2.0%	2.0%		Sept. 13
EUR19: Sentix	19.6	19.2	9.3	12.1	14.7	14.9	Sept. 10
EUR19: Industrial production, m/m	-0.8%	1.4%	-0.7%	0.3%			Sept. 12
EUR19: Industrial production, y/y	1.8%	2.4%	2.3%	1.5%			Sept. 12

MMWB estimates in red

Chart of the Week: Progress of IMF negotiations

Argentina: Exchange rate and inflation

Inflation in % (y/y) — Argentine Peso to USD (r.s.)
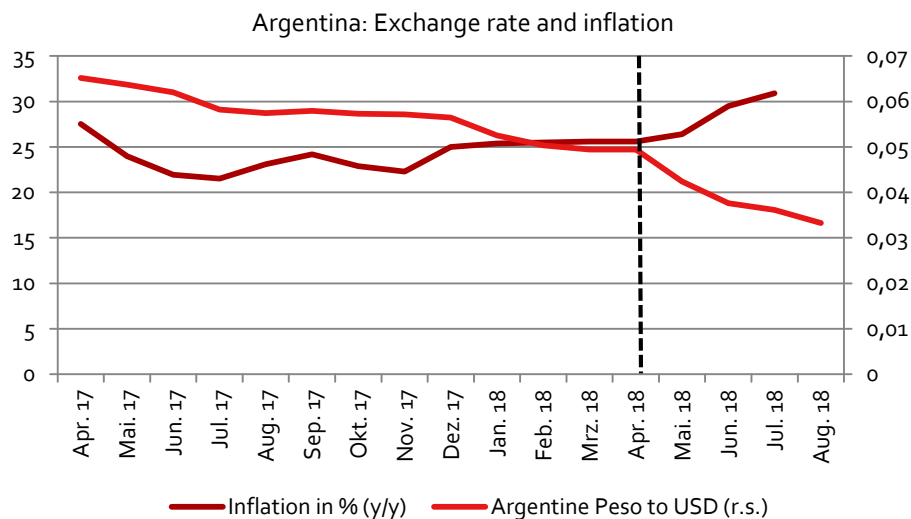
Last week was turbulent for the Argentine peso. After President Mauricio Macri asked the International Monetary Fund (IMF) on Wednesday to accelerate disbursement of the USD 50 billion aid package agreed to in June, the peso fell by more than 16% against the US dollar. Since the beginning of the year, the currency has already lost more than half of its value and is thus the weakest among the emerging countries. There is growing danger of a crisis. In addition to the dramatic currency decline, high inflation and unfavorable financing conditions on international capital markets are weakening Argentina's economy. Climbing interest rates in the US are prompting more and more investors to move their capital from emerging countries to the United States.

Treasury Minister Nicolas Dujovne and Central Bank Deputy Governor Gustavo Canonero met with IMF Managing Director Christine Lagarde on Tuesday to discuss possible ways of getting financial assistance to Argentina faster. The Argentine government would thus like to reduce the country's dependence on the financial markets and regain investors' confidence, so the economy can become more stable again. The results of the negotiations have been positive so far. Lagarde emphatically notes great progress and hopes for a speedy conclusion of the negotiations so she can present a proposal to the IMF Executive Board. Minister Dujovne is optimistic about obtaining approval for short-term aid even before the end of this month. However, he also warns at the same time that expectations should not be set too high, since an economic recovery would nevertheless proceed slowly. The peso has responded positively to the progress of the negotiations.

Argentina is structurally important for the world economy, but is not one of Germany's main trading partners. Consequently, developments in that country should not significantly affect the German economy.

Market data overview

	As of 07.09.2018 11:06	Change versus				
Stock marktes		30.08.2018 -1 week	03.08.2018 -1 month	05.06.2018 -3 months	05.09.2017 -1 year	29.12.2017 YTD
Dow Jones	25996	0,0%	2,1%	4,8%	19,5%	5,2%
S&P 500	2878	-0,8%	1,3%	4,7%	17,1%	7,6%
Nasdaq	7995	-1,2%	2,3%	4,7%	25,4%	15,8%
DAX	11931	-4,5%	-5,4%	-6,7%	-1,6%	-7,6%
MDAX	26133	-3,9%	-2,8%	-2,1%	5,8%	-0,3%
TecDAX	2902	-3,9%	-0,8%	2,5%	25,7%	14,8%
EuroStoxx 50	3292	-4,0%	-5,5%	-4,8%	-3,8%	-6,0%
Stoxx 50	2965	-3,5%	-5,5%	-3,6%	-2,4%	-6,7%
SMI (Swiss Market Index)	8834	-2,3%	-3,5%	3,5%	-0,4%	-5,8%
Nikkei 225	22307	-2,5%	-1,0%	-1,0%	15,1%	-2,0%
Brasilien BOVESPA	76416	0,0%	-6,2%	-0,3%	5,9%	0,0%
Russland RTS	1057	-1,8%	-7,7%	-9,9%	-4,0%	-8,5%
Indien BSE 30	38322	-1,0%	2,0%	9,8%	20,5%	12,5%
China Shanghai Composite	2702	-1,3%	-1,4%	-13,2%	-20,2%	-18,3%
MSCI Welt (in €)	2144	-1,3%	-1,0%	1,4%	12,0%	5,0%
MSCI Emerging Markets (in €)	1018	-3,3%	-5,6%	-10,8%	-4,2%	-9,5%
Bond markets						
Bund-Future	160,43	-255	-162	-103	-509	-125
Bobl-Future	131,37	-84	-45	-87	-199	-24
Schatz-Future	111,88	-11	-6	-24	-45	-9
3 Monats Euribor	-0,32	0	0	0	1	1
3M Euribor Future, Dec 2017	-0,30	-2	-2	-2	-6	0
3 Monats $ Libor	2,32	0	-3	0	100	62
Fed Funds Future, Dec 2017	2,23	1	2	8	89	0
10 year US Treasuries	2,89	2	-7	-3	82	47
10 year Bunds	0,37	2	-4	-1	3	-6
10 year JGB	0,11	0	0	6	11	6
10 year Swiss Government	-0,09	1	-6	-5	6	4
US Treas 10Y Performance	563,61	-0,4%	0,6%	0,6%	-5,4%	-3,1%
Bund 10Y Performance	618,66	-0,3%	0,3%	0,6%	1,1%	1,9%
REX Performance Index	484,38	0,0%	0,1%	0,2%	0,0%	0,8%
US mortgage rate	0,00	0	0	0	0	0
IBOXX AA, €	0,80	6	6	-1	13	12
IBOXX BBB, €	1,73	9	16	17	47	50
ML US High Yield	6,57	8	3	5	48	42
JPM EMBI+, Index	772	-0,7%	-3,3%	-2,7%	-8,4%	-7,7%
Convertible Bonds, Exane 25	7359	-0,1%	-0,5%	-1,0%	3,0%	-0,5%
Commodities						
CRB Spot Index	409,89	-0,2%	-3,9%	-7,8%	-6,1%	-5,2%
MG Base Metal Index	304,18	-3,1%	-3,5%	-15,6%	-11,8%	-15,2%
Crude oil Brent	76,60	-1,2%	4,4%	2,7%	42,8%	15,0%
Gold	1200,61	0,0%	-1,6%	-7,3%	-10,2%	-7,9%
Silver	14,22	-2,3%	-8,4%	-13,8%	-20,7%	-16,4%
Aluminium	2035,50	-3,6%	1,7%	-11,9%	-1,8%	-9,8%
Copper	5854,25	-3,4%	-5,2%	-17,5%	-14,8%	-18,8%
Iron ore	68,13	1,4%	-0,2%	5,2%	-12,3%	-4,4%
Freight rates Baltic Dry Index	1484	-8,1%	-16,3%	18,8%	22,1%	8,6%
Currencies						
EUR/ USD	1,1643	-0,4%	0,5%	-0,3%	-2,1%	-2,9%
EUR/ GBP	0,8998	0,4%	1,1%	2,9%	-1,7%	1,4%
EUR/ JPY	128,92	-1,1%	-0,3%	0,7%	-0,8%	-4,5%
EUR/ CHF	1,1237	-0,9%	-2,5%	-2,4%	-1,5%	-4,0%
USD/ CNY	6,8383	0,1%	0,2%	6,7%	4,5%	5,1%
USD/ JPY	111,53	0,5%	0,2%	1,6%	2,5%	-1,0%
USD/ GBP	0,77	0,5%	0,6%	3,1%	0,7%	4,6%

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