ECONOMIC SITUATION AND STRATEGY

Risk management, Part 2: Sell loss-makers?

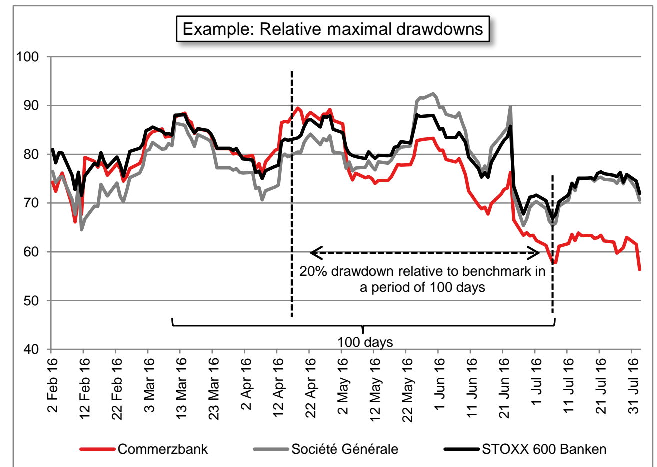
At some point, every investor faces the question of what to do with the "losers" in their stock portfolio. Should they sell respective shares to avoid further value decline, even though realizing the loss is hard to accept? Or should they instead double down and hope for a recovery, even when those stocks seem problematic?

The question is even more important because basic investment strategies are tied to it. On the one side are "value investors" looking for undervalued stocks that will return to fair value in the medium to long term. On the other side are "momentum investors" seeking to participate in the positive momentum of a trend and avoid negative trends because herd behavior is often observed on the markets. The followers of each strategy are so convinced of "their" respective philosophy that it is worth analyzing the topic in greater depth. That might also yield important conclusions for a type of active risk management relying on loss thresholds that trigger stock sales.

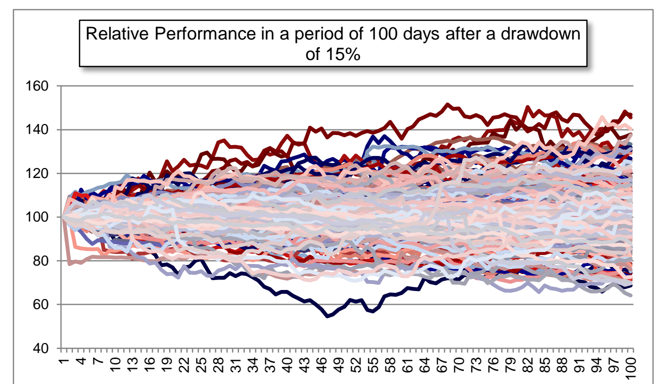
A first and naive approach to such an analysis would be to investigate stocks that have booked absolute losses of 10%, 15%, or 20% and then look at how they have performed thereafter. But there can always be phases when the broad market declines by 10% or more, thus involving not only above-average losers, but also all stocks or at least most cyclical stocks even though they have performed well relative to their sectors.

Instead of this, we focus on the stocks that have performed notably worse than their sectors. For, if a stock's price trend is significantly weaker relative to its sector, the reasons for the disappointing price trend presumably lie in the company itself. We have therefore analyzed the historical performance of stocks from the STOXX 600 after a price decline in comparison with their respective sector benchmark. As the measure for the price decline, we refer to the maximum drawdown of the relative time series in comparison with a previous relatively achieved high of the past 100 days. Whenever this has exceeded a certain limit, the performance of the following 100 days has been projected forward in a notional basket of stocks.

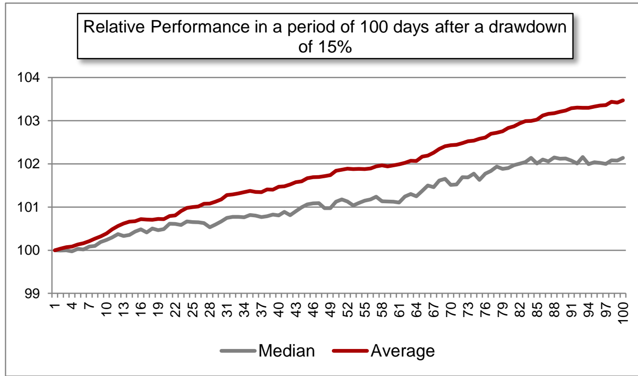
The analysis of the relative drawdowns and subsequent relative performance enables us to isolate the price loss of individual stocks and consider it detached from market movements. The chart below shows the development of Commerzbank and Société Générale in comparison with the sector benchmark, the STOXX 600 Bank index. One can clearly see that Société Générale also loses value in the observed period, but the loss is not as severe and that of the benchmark. The situation is different for Commerzbank, which loses more than proportionately relative to the benchmark. In July of last year, Commerzbank's maximum relative drawdown reached 20% in a period of 100 days, while the maximum relative drawdown of Société Générale stock amounted to "only" 8% in the same period. In this case, Commerzbank would have been the one of the stocks whose subsequent performance we would have analyzed.



We have applied the same procedure to all stocks of the STOXX 600 in the period from January 1, 2012 to January 12, 2017. We have deliberately chosen this period because it represents a stable economic upswing phase. In stress phases, on the other hand, there can be liquidity shortages and irrational exaggerations that would distort the result. Moreover, this analysis is very relevant for the coming market phase, in which we expect the upswing to continue. Altogether, our study of a 5% drawdown as a trigger arrived at 20,231 hits, and our study of 10%, 15%, 20%, and 25% drawdowns yielded 10,222, 6,074, 2,980, and 2,810 examples, respectively. The charts below show by way of example the cohort of the data series and the median and mean average of relative performance in the subsequent 100 days on a drawdown of 15%.



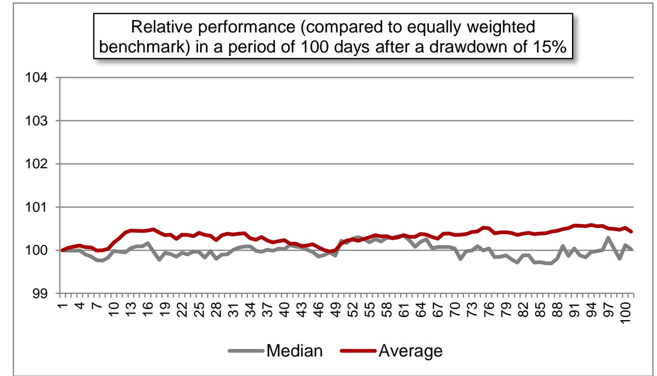
Looking at the chart, one discerns no systematic pattern of the different data series. On the contrary, it appears almost conspicuously unsystematic or random. The situation looks somewhat different if one considers the mean and the median of such a strategy. On average, a price recovery occurs in the 100 days following a sharp price decline. We obtain a similar result when we consider drawdowns of 5%, 10%, 20%, and 25%, with the recovery being more pronounced, the greater the preceding drawdown was.



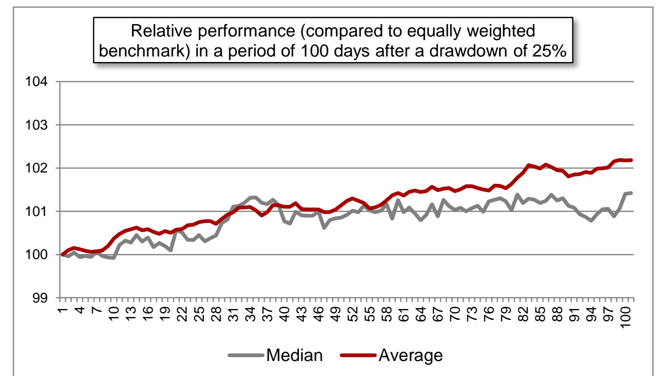
If one were always to buy when a stock has reached a drawdown of 15% in a 100-day period, one could achieve systematic outperformance versus the benchmark. Or for the purpose of risk management, the rule would be not to sell, but rather to hold and await the stock price's recovery. In practice, however, one does not have so many stocks, nor would one reallocate so often. In this connection, the dispersion in the chart on the last page suggests that it is a very risky bet to hope that exactly the stock in the portfolio will not land in the lower half. Such a strategy relying on recovery would only be constructive in a systematic way if one made reallocations according to this rule all the time with a large selection of stocks and high frequency.

Furthermore, we have considered whether the positive performance on average might also be due to the "small cap effect." This effect derives from the observation that stocks of companies with low market capitalization (small caps) achieve a higher return than large companies' stocks. The reasons given for this are, for example, that small companies usually grow faster and their business models are more adaptable. Takeovers or takeover expectations could be additional stock price drivers. Since the benchmarks of individual sectors are weighted according to market capitalization, they are automatically oriented towards large caps. Against this background, even a randomly generated portfolio would deliver better performance on average than the benchmark. To test this, we have recalculated the benchmarks by equally weighting the stocks that belong to them. The result largely confirms our supposition. It is not very noticeable in the case of relatively low loss thresholds of 5% to 15%. Neither is there an appreciable recovery, nor do the relative losses continue.

This means that markets appear to be so efficient that a purely quantitative analysis does not provide any added value for investors. Patterns are not discernible on the basis of relative stock price development in the case of normal losses.



There is an exception to that, however. In the 2,810 cases where there was an unusually large drawdown of at least 25%, positive relative performance versus the equally weighted benchmark is discernible. The outperformance is not very great at 1.5% or 2% (depending on whether measured by the median or mean average), but it is quite stable, especially since the trend already emerges on a drawdown of 20%. This means that it is helpful to have a calm hand in the face of large relative losses. New investments in heavily punished stocks might likewise be interesting. However, the dispersion is also so great here that private investors scarcely have enough capital to exploit this effect systematically. Moreover, the benefit for institutional investors would probably be consumed by associated transactions costs.



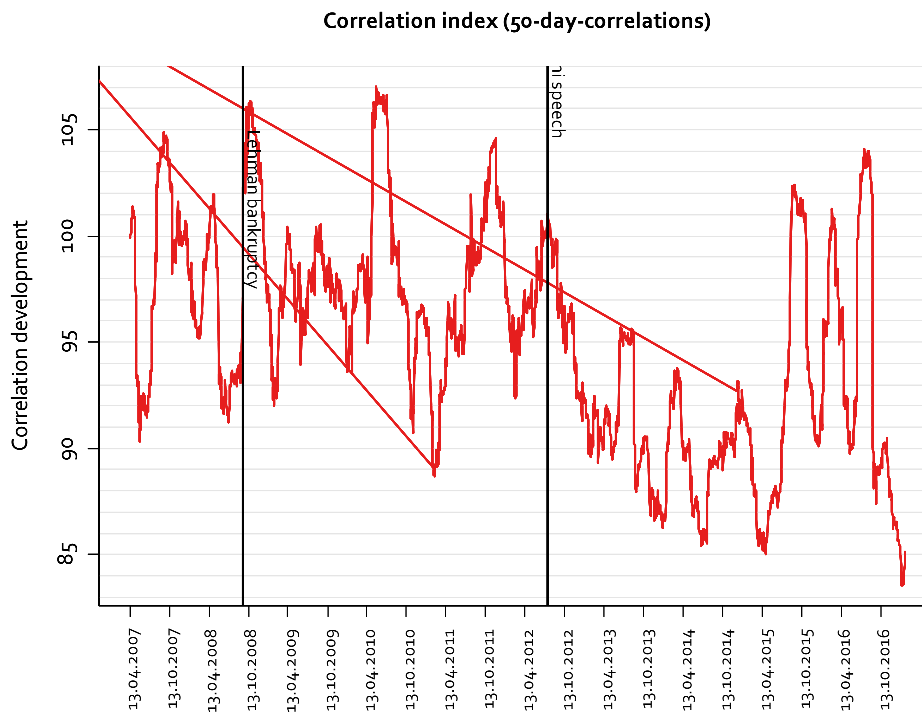
Despite taking a different approach, we arrive at a conclusion similar to that of the first part of our risk management study. It remains the task of stock analysts to evaluate each case by examining it individually. One cannot rely on purely quantitative statistics. Moreover, risk management should concentrate more on the overall portfolio than on individual stocks.

Weekly outlook for February 6-10, 2017

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Release
DE: New orders, m/m	-0.4%	5.0%	-2.5%	0.8%			February 6
DE: New orders, y/y	2.9%	6.4%	3.3%	4.4%			February 6
DE: Industrial production, m/m	-1.3%	0.5%	0.4%	-0.2%			February 7
DE: Industrial production, y/y	1.5%	1.6%	2.1%	2.0%			February 7
DE: Exports, m/m	-0.9%	0.5%	3.9%	-0.5%			February 9
DE: Exports, y/y	0.5%	2.0%	4.8%	6.2%			February 9
DE: Imports, m/m	-0.8%	1.2%	3.5%	-0.4%			February 9
DE: Imports, y/y	-1.8%	1.7%	3.8%	5.1%			February 9
EUR19: Sentix	5.6	8.5	13.1	10.0	18.2	14.8	February 6

MMWB estimates in red

Chart of the Week: Markets with lots of "life of the own"



Markets often function like a system of "communicating pipes" in which water in different pipes always seeks the same level as long as the pipes are connected with one another. If the water level is raised in one pipe, it does not develop a "life of its own," but instead the fluid in that pipe drops to the (then higher) level of the other pipes. There is thus a kind of communication among the pipes, and markets also function exactly according to this principle. If yields on government bonds rise, a yield increase will also be observed in corporate bonds. And falling prices for high-yield bonds are usually accompanied by falling stock prices. However, these relationships change over time – markets sometimes move closely in step with one another, sometimes less so. At present, markets around the world exhibit a considerable degree of independence, which our correlation index impressively demonstrates. A few days ago, our indicator actually hit the lowest level of correlation among diverse markets measured in over ten years. On the one hand, this suggests that investors are acting very rationally, almost uninfluenced by a herd mentality. On the other, this high degree of investor "ease" should be viewed critically, since an exogenous shock would catch many market participants completely off balance and lead to substantial reactions.

Stock marktes	As of 06.02.2017 10:55	Change versus 27.01.2017 -1 Woche	02.01.2017 -1 Monat	02.11.2016 -3 Monate	30.12.2016 YTD
Dow Jones	20071	-0,1%	1,6%	11,8%	1,6%
S&P 500	2297	0,1%	2,6%	9,5%	2,6%
Nasdaq	5636	-0,4%	4,7%	10,4%	4,7%
DAX	11658	-1,3%	0,5%	12,4%	1,5%
MDAX	22589	-1,3%	0,8%	9,1%	1,8%
TecDAX	1848	-0,5%	0,4%	9,6%	2,0%
EuroStoxx 50	3280	-0,7%	-0,9%	10,1%	-0,3%
Stoxx 50	3017	-0,5%	-0,1%	9,6%	0,2%
SMI (Swiss Market Index)	8362	-0,2%	1,7%	8,6%	1,7%
Nikkei 225	18915	-2,8%	-1,0%	10,4%	-1,0%
Brasilien BOVESPA	64954	-1,6%	9,0%	2,6%	7,8%
Russland RTS	1186	-0,8%	2,9%	21,9%	2,9%
Indien BSE 30	28459	2,1%	7,0%	3,4%	6,9%
China Shanghai Composite	3157	-0,1%	1,7%	1,8%	1,7%
MSCI Welt (in €)	1806	-0,5%	0,3%	11,5%	1,2%
MSCI Emerging Markets (in €)	919	-0,3%	3,8%	6,6%	4,6%
Bond markets					
Bund-Future	162,78	93	-169	21	-137
Bobl-Future	133,40	64	-36	217	-23
Schatz-Future	112,32	16	2	31	2
3 Monats Euribor	-0,33	0	-1	-2	-1
3M Euribor Future, Dec 2017	-0,31	-6	-3	-4	0
3 Monats $ Libor	1,03	0	4	16	4
Fed Funds Future, Dec 2017	1,11	-2	-2	37	0
10 year US Treasuries	2,45	-3	2	66	1
10 year Bunds	0,40	-6	31	35	29
10 year JGB	0,10	3	6	16	6
10 year Swiss Government	-0,09	5	12	28	12
US Treas 10Y Performance	568,11	0,1%	-0,2%	-4,9%	-0,2%
Bund 10Y Performance	604,18	0,4%	-1,6%	-1,9%	-1,4%
REX Performance Index	482,59	0,2%	-0,6%	-0,7%	-0,6%
US mortgage rate	0,00	0	0	0	0
IBOXX AA, €	0,79	-4	12	24	12
IBOXX BBB, €	1,61	-2	12	22	11
ML US High Yield	6,22	1	-24	-56	-24
JPM EMBI+, Index	788	0,5%	2,0%	-1,0%	2,0%
Convertible Bonds, Exane 25	6889	0,2%	-0,7%	2,8%	-0,4%
Commodities					
CRB Index	431,27	0,1%	2,5%	2,0%	2,5%
MG Base Metal Index	301,80	1,5%	7,9%	14,0%	7,9%
Crude oil Brent	56,76	2,3%	0,1%	21,6%	0,1%
Gold	1223,10	2,9%	5,7%	-6,3%	5,7%
Silver	17,55	2,8%	9,3%	-6,0%	9,3%
Aluminium	1817,75	0,1%	6,7%	5,5%	6,7%
Copper	5870,50	-0,2%	6,3%	19,7%	6,3%
Iron ore	83,50	0,0%	4,4%	25,6%	4,4%
Freight rates Baltic Dry Index	752	-9,1%	-21,7%	-9,8%	-21,7%
Currencies					
EUR/ USD	1,0744	0,6%	2,7%	-3,2%	1,9%
EUR/ GBP	0,8608	0,9%	0,8%	-4,7%	0,8%
EUR/ JPY	120,93	-1,7%	-1,6%	5,5%	-2,0%
EUR/ CHF	1,0690	0,0%	-0,2%	-0,9%	-0,5%
USD/ CNY	6,8609	-	-1,3%	1,5%	-1,3%
USD/ JPY	113,25	-1,6%	-3,6%	9,6%	-3,1%
USD/ GBP	0,80	0,6%	-1,0%	-1,3%	-1,0%

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