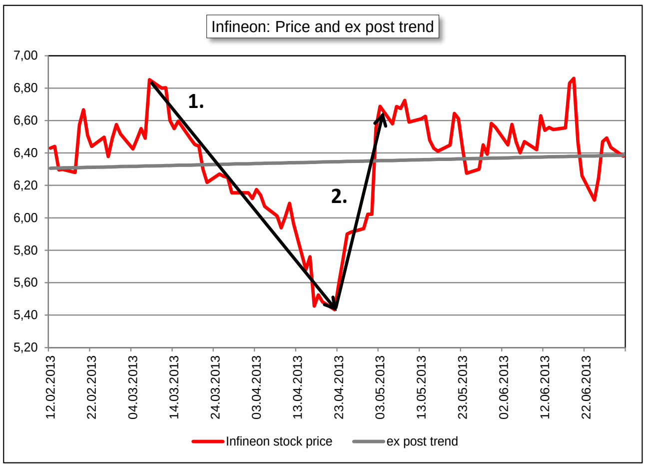
Stocks: Never catch a falling knife?

"Never catch a falling knife" is an often-cited stock market maxim, understood as a warning to investors not to buy on declining prices. Ultimately, the fear is that the sell-off will continue and prices will fall further. This is a topic regularly and sometimes heatedly discussed among the experts. While one group expects a continuation of the downward trend, the other considers a trend reversal likely. Both sides field arguments that cannot be easily dismissed.

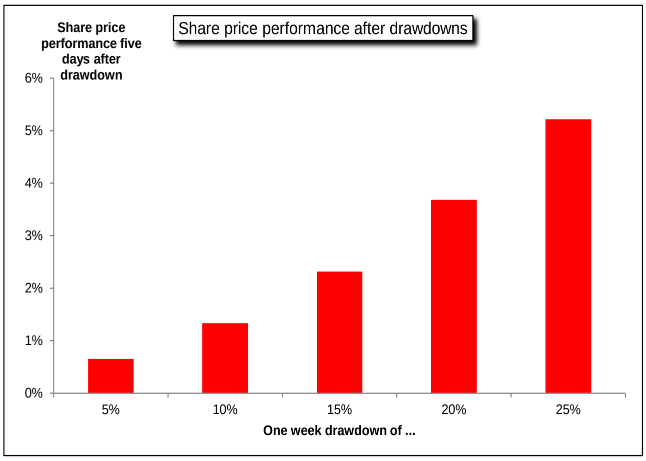
Adherents of the mean reversion concept consider a price advance likely in principle after a sharp price decline. They are persuaded that stocks fluctuate around a relatively long-term trend. It may not be possible to determine the trend itself and hence the size of the fluctuation around it with mathematical certainty. But, it is said, a very large divergence from the trend constitutes an exaggeration and will therefore be corrected by the market. A strong downward deviation from the trend usually occurs on a sharp price decline, and a mean reversion, i.e., a price advance in the direction of the trend, would therefore be likely on this view. This principle is illustrated in the chart by the price trend of Infineon stock. The stock price falls initially from about EUR 6.85 to about EUR 5.43 (1) and thus far below the indicated trend, which we have inserted for better understanding. Altogether, the price loss adds up to about 20%. In the days following that, however, the stock price recovers strongly and climbs to about EUR 6.69 (2) within only nine trading days, a plus of 23% from its low.



On the other hand, a fundamentally different approach is taken by the "trend followers," who rather consider it in principle likely that a trend on the stock market will continue. When the price of a stock declines, the threat of even greater dangers arises, according to this view. Other market participants might likewise sell off their stock, e.g., because their stop-loss marks have been reached or because investors prefer to realize existing gains due to the heightened uncertainty. After all, a price decline does not come out of the clear, blue sky, it is said, but is rather a reaction to changes in the corporate, sectoral, or market environment. Because it is difficult for many investors to estimate how those changes will affect a company's future earnings situation, it is argued, they would also draw conclusions from the reactions of other investors. Falling prices lead to herd behavior, with the result that the downward trend reinforces itself.

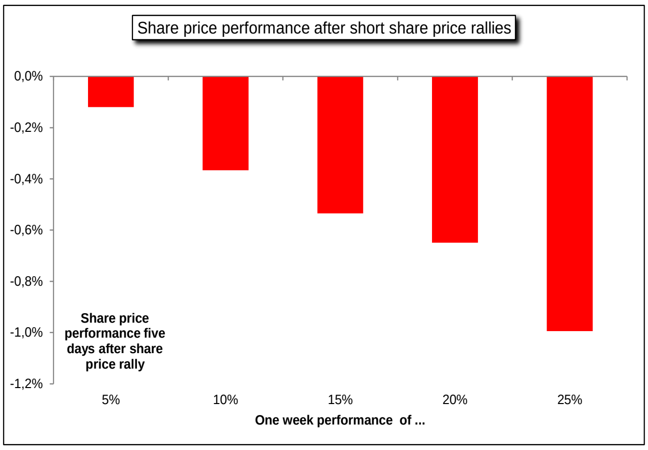
We consider ourselves pragmatists regarding the question whether there will be a mean reversion or trend continuation on the stock market. There are good arguments for both positions. In our view, the answer mainly depends on the investor's time horizon. Over long periods, trend-following strategies prove superior, while strategies on which a mean reversion is assumed function better over short investment periods.

In the last issue of Economic Situation & Strategy, we presented the results of a study in our chart of the week. In that study, we tested whether after a sharp price decline over a period of five days, a price advance in the subsequent five days is likely. The results were clear. On average, a stock's performance after a very weak trading week turns out above average in the subsequent week. This argues for the mean reversion theory. We furthermore concluded that performance is better, the more the stock has lost in the previous week. One result that is expectable on the mean reversion theory is that the greater the price decline, the stronger the recovery must be so that the stock's divergence from trend becomes smaller.



We have made the same calculations again for this flash report, but with a significantly larger data set. We have used the daily price data for stocks in the Stoxx 600 over a period of 15 years. The results differ only somewhat in magnitude from our calculations last week, but the basic message is the same. A trend reversal, or mean reversion, is likely for short investment horizons.

The cross check also holds. After very strong performance by a stock, prospects are slightly dimmed at first. Our calculations show that price advances on average are followed by weaker weeks. The mean reversion effect, however, is significantly less pronounced after a price rally than after a price correction.



There are three aspects that we think mainly contribute to the described asymmetry. First, stocks developed positively in the period studied, with the result that the performance of an average trading week without further information would turn out positive in expectation value and not negative as in our analyses. Second, investors can benefit more easily from the mean reversion if stocks have previously fallen. In that case, one needs only to purchase the stock to benefit from the price advance that one hopes will result in the subsequent week. On the other hand, after an especially sharp price advance, investors must short the stock – if it is not in their portfolio – or buy a product that benefits from an increase of the stock's price. However, that is not an option for many conservative investors. Perhaps, mean reversion works better on a price decline because more market participants can bet on a counter-reaction. The third aspect concerns the stability of the mean reversion over time, or the question at what points in time an investor can bet on a counter-reaction. We devote the rest of the article to this point.

Whether investors, private or institutional, can sensibly use mean reversion effects for their strategy also depends on how stable the connection is over time. It should at least be possible to make statements about when the chances of success are good and when such a strategy has only a low probability of investment success. Our calculations show several interesting results. In the past, the trend reversal after a sharp price decline has always worked very well over long market phases when there have been no relatively large distortions in the market. However, the mean reversion strategy has not worked when the overall market has corrected for a relatively long time as in the case of the financial crisis or the dot-com bubble and in short, sharp corrections as in the summer of 2011. At that time, stocks simply fell further after a price loss in most cases. Our analyses show that a recovery after price losses occasionally fails to occur before a correction on the overall market. Even more conspicuous is the movement over time in the case of a mean reversion that occurs after a short rally. The overall results show the threat of a counter-reaction after a strong price increase. In the past, however, that has failed to materialize in some cases for several years. Especially in intact bull markets, stocks have tended after a decent price advance to continue increasing. Investors would have had very good results in the years when development of the overall market has been weak, as in the period from 2000 to the beginning of 2003. It is also notable that the power of the bulls on the markets markedly declined already in 2007. Even before the stock market's collapse in the context of the financial crisis, relatively strong price advances for individual stocks were regularly followed by a stronger mean reversion, or price decline, in the subsequent week. For readers, who make decisions based on technical indicators, that could be an interesting signal for larger fluctuations on the market.

What possibilities do our considerations offer the reader beyond that? For investors, it is easier to bet on a counter-movement after a sharp price decline for several reasons. Execution is simpler, the strategy works with greater consistency over time, and finally performance has been significantly better, at least in the past. It should be noted, however, that the results we have calculated (see chart on p. 1) do not include costs and are distorted slightly upward by survivorship bias.[1] In view of the holding period of only one trading week, the cost burden is a factor that can have a marked influence, since a mean reversion strategy should be set up with sufficient diversification. For private investors, whose cost burden is higher than that of institutional investors, this means, measured in terms of performance in the past, that after deduction of costs, it might only become worthwhile to buy after declines on the order of 10% or 15%. Investors who do not wish to pursue a mean reversion strategy generally may also use our results for timing purposes. That is especially true when the market is clearly penalizing companies that have fundamentally intact business models, e.g., for poor numbers. A bold entry might then pay off within a short time.

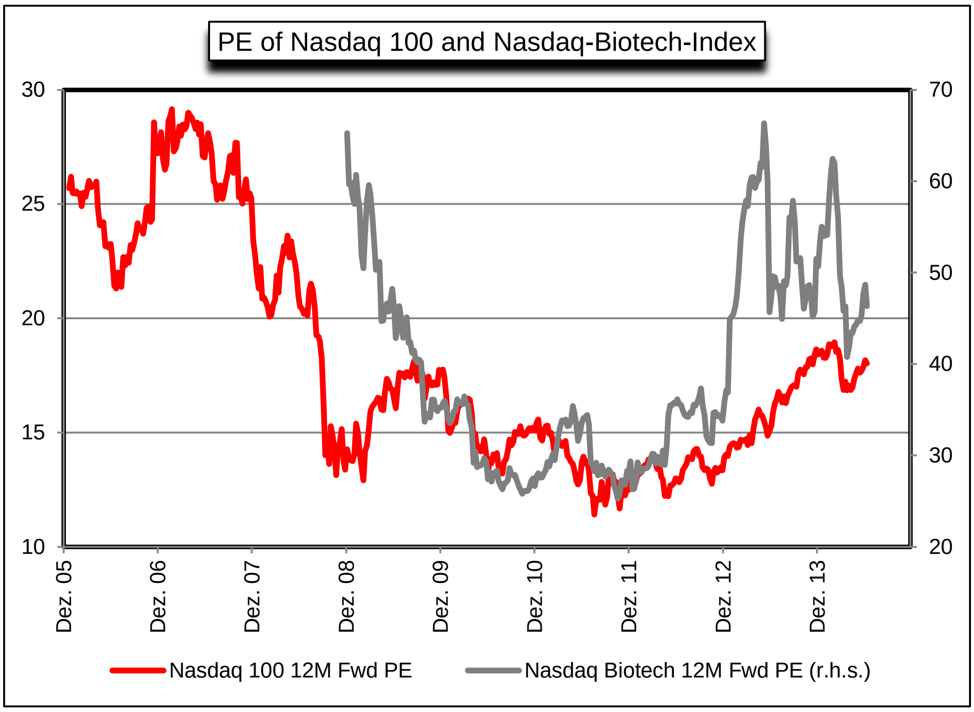
[1] The stocks used come from the Stoxx 600 in its current composition. The performance of the basket of stocks is better than that of the Stoxx 600 in the same period. That has to do with the survivorship bias. This bias results from the index's only containing stocks with high market capitalization. That is achieved when stocks show good performance over a long period. Stocks with very poor performance sooner or later lose too much market capitalization and drop out of the stock index. Our basket therefore contains only stocks that have experienced no especially high loss of market capitalization (and worse than average performance) and some stocks with especially good performance that were not actually in the index the whole time.

Weekly outlook for July 21-25, 2014

	Feb.	Mar.	Apr.	May	June	July	Release
DE: Producer prices, m/m	0.0%	-0.3%	-0.1%	-0.2%	0.1%		July 21
DE: Producer prices, y/y	-0.9%	-0.9%	-0.9%	-0.8%	-0.7%		July 21
DE: Import prices, m/m	-0.1%	-0.6%	-0.3%	0.0%	0.2%		from July 24
DE: Import prices, y/y	-2.7%	-3.3%	-2.4%	-2.1%	-1.2%		from July 24
DE: PMI, manufacturing	54.8	53.7	54.1	52.3	52.0	51.8	July 24
DE: PMI, services	55.9	53.0	54.7	56.0	54.8	53.5	July 24
DE: GfK consumer confidence	8.5	8.5	8.5	8.6	8.9	8.9	July 25
DE: Ifo business climate index	111.3	110.7	111.2	110.4	109.7	108.9	July 25
EUR18: consumer confidence	-12.7	-9.3	-8.6	-7.1	-7.5	-7.7	July 23
EUR18: PMI, manufacturing	53.2	53.0	53.4	52.2	51.8	51.6	July 24
EUR18: PMI, services	52.6	52.2	53.1	53.3	52.8	52.7	July 24
EUR18: M3 money supply, y/y	1.3%	1.0%	0.7%	1.0%	1.2%		July 25

MMWB estimates in red

Chart of the week: Are stocks overvalued?



This week, Fed Chairwoman Janet Yellen testified before the Banking Committee of the US Senate. Her appearance drew attention not because of her comments about the US economy and the conclusions to be drawn for Fed monetary policy. That was largely old news. However, in the document accompanying her speech, the Monetary Policy Report, there was an uncustomary assessment by the Fed regarding the valuation of US stocks. While the report does not consider the broad US market wrongly valued by historical comparison, the Fed finds that some market segments, such as small caps in the areas of biotechnology and social media, definitely show signs of overvaluation. We agree. While both the S&P 500, with a P/E ratio of 15.6 based on earnings expectations for the next 12 months, and the NASDAQ 100 index, with a P/E ratio of about 18, are no longer cheap but are also not substantially more expensive than on average of the past years, that is not true of the NASDAQ biotech index. With a P/E ratio of almost 50 based on expected earnings and a P/E ratio of almost 100 based on earnings reported for the past 12 months, this market segment is very expensive. However, that does not mean prices must automatically fall through the floor. When Alan Greenspan spoke the first time in December 1996 about "irrational exuberance" on the stock markets, over three years passed before the stock markets shifted into reverse. Valuation ratios alone have limited utility for timing purposes.

Capital markets at a glance

Stock markets	As of 17.07.2014	Change versus 11.07.2014 -1 week	17.06.2014 -1 month	17.04.2014 -3 month	31.12.2013 YTD
Dow Jones	16977	0,2%	1,0%	3,5%	2,4%
S&P 500	1958	-0,5%	0,8%	5,0%	5,9%
Nasdaq	4363	-1,2%	0,6%	6,5%	4,5%
DAX	9754	0,9%	-1,7%	3,7%	2,1%
MDAX	16452	0,9%	-2,8%	1,9%	-0,7%
TecDAX	1259	-1,1%	-4,1%	5,0%	7,9%
EuroStoxx 50	3158	0,0%	-3,6%	0,1%	1,6%
Stoxx 50	3007	0,7%	-1,5%	3,0%	3,0%
SMI (Swiss Market Index)	8548	0,9%	-1,4%	2,1%	4,2%
Nikkei 225	15370	1,4%	2,6%	6,6%	-5,7%
BOVESPA	55638	1,6%	2,5%	6,8%	8,0%
RTS	1299	-6,1%	-3,3%	10,8%	-10,0%
BSE 30	25561	2,1%	0,2%	13,0%	20,7%
China Shanghai Composite	2056	0,4%	-0,5%	-2,1%	-2,9%
MSCI Welt (in €)	1735	0,5%	0,7%	6,4%	6,5%
MSCI Emerging Markets (in €)	1063	0,9%	2,2%	7,9%	8,1%
Bond markets					
Bund-Future	148,20	56	315	411	903
Bobl-Future	128,44	4	89	289	401
Schatz-Future	110,68	0	6	26	38
3 months Euribor	0,20	0	-2	-13	-9
3 months $ Libor	0,23	0	0	1	-1
10 year US Treasuries	2,47	-5	-18	-24	-54
10 year Bunds	1,15	-5	-25	-36	-79
10 year JGB	0,54	0	-5	-7	-20
US Treas 10Y Performance	537,33	0,4%	1,8%	2,9%	6,7%
Bund 10Y Performance	542,05	0,5%	2,4%	4,1%	9,5%
REX Performance Index	460,20	0,1%	0,7%	1,7%	4,5%
US mortgage rate	4,15	0	-5	-12	-33
IBOXX AA, €	1,33	-2	-13	-37	-74
IBOXX BBB, €	2,06	-1	-4	-32	-76
ML US High Yield	5,90	7	16	-15	-49
JPM EMBI+, Index	714	-0,6%	1,6%	4,2%	9,5%
Convertible Bonds, Exane 25	6267	0,0%	-1,8%	-0,6%	2,3%
Commodities					
CRB Index	528,07	-0,4%	-3,9%	-6,8%	3,9%
MG Base Metal Index	342,24	1,5%	6,5%	7,0%	3,9%
Crude oil Brent	105,96	-1,9%	-6,2%	-3,7%	-5,0%
Gold	1303,80	-2,4%	2,7%	0,4%	7,9%
Freight rates Baltic Dry Index	738	-9,3%	-14,0%	-20,6%	-67,6%
Currencies					
EUR/ USD	1,3525	-0,5%	-0,3%	-2,4%	-1,9%
EUR/ GBP	0,7909	-0,5%	-0,9%	-3,9%	-4,9%
EUR/ JPY	137,27	-0,3%	-0,8%	-3,0%	-5,1%
EUR/ CHF	1,2147	0,0%	-0,3%	-0,2%	-1,1%
USD/ JPY	101,18	-0,2%	-0,9%	-1,2%	-3,9%

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