



Nowcasting: A Risk Management Tool

Alexander Ineichen, CAIA
Founder
Ineichen Research &
Management AG

Nowcasting is to forecasting what astronomy is to astrology. At the beginning of 2014, 72 out of 72 economists “predicted” that U.S. interest rates would rise throughout the year. They fell. One ought to know what one doesn’t know. It’s always experts—often well-educated professionals who do not suffer from a lack of self-confidence—who create the forecasts; quite often keeping a straight face. Expert failure extends far beyond the investment scene. The problems often reside in man’s information processing capabilities. The expert is a serial or sequential processor of data who can only handle information reliably in a linear manner. Not only can experts analyze information incorrectly, they can also find relationships that are not there, a phenomenon called “illusionary correlation”. We suggest that investors replace forecasting with nowcasting.

What is nowcasting?

Nowcasting is a reasonably new word; at least in economic finance. It is either the opposite

of forecasting or simply a pun on the word ‘forecasting’. The term nowcasting is also a contraction of ‘now’ and ‘forecasting’. The term is used in both economics and meteorology. A forecaster tries to predict the future. Empirically, this has proven as quite a challenge in many endeavors related to human action. As Mark Twain succinctly put it: “Prediction is very difficult, especially if it’s about the future.”

We define nowcasting as follows:

Nowcasting is the economic discipline of determining a trend or a trend reversal objectively in real time. Nowcasting is fact-based, focuses on the known and knowable, and therefore avoids forecasting. Nowcasting is the basis of a robust decision-making process.¹

A ‘nowcaster’ does not try to predict the future, but focuses what is known today, i.e., known now in real time. Forecasts are an integral part of orthodox asset allocation and are essentially guesswork. In other words, guessing is an

integral part of how assets are allocated and risk is taken and subsequently managed. However, some investors, for example trend-followers, seem to do very well without a forecast entering into their investment approach. Trend followers look at prices, not forecasts. A price is a fact, whereas a forecast is not; it is someone's opinion that might or might not have merit. A forecast is biased by definition because it is an opinion. An investment process focussing on facts seems more logical than an investment process that focuses on opinions. A fact is a fact whereas an opinion is rather fluffy by comparison, and its merit often only assessable with the benefit of hindsight. Economist John Kenneth Galbraith put it most eloquently: "One of the greatest pieces of economic wisdom is to know what you do not know."

A trend is a fact and is determinable. Momentum is one approach by which a trend can be determined. A trend is either positive or negative; essentially up or down. This makes investment life a lot simpler. Currently the economic trend in the U.S. is positive and the economic trend in Latin America isn't. At one level, it's that simple. The odds favour the former and not the latter.

This article examines three types of momentum: price, economic (top-down), and earnings (bottom-up) momentum. In the following sections some aspects related to these three approaches are discussed, starting with price momentum. The key take-away is the applicability for a pragmatic approach to risk management.

Price Momentum

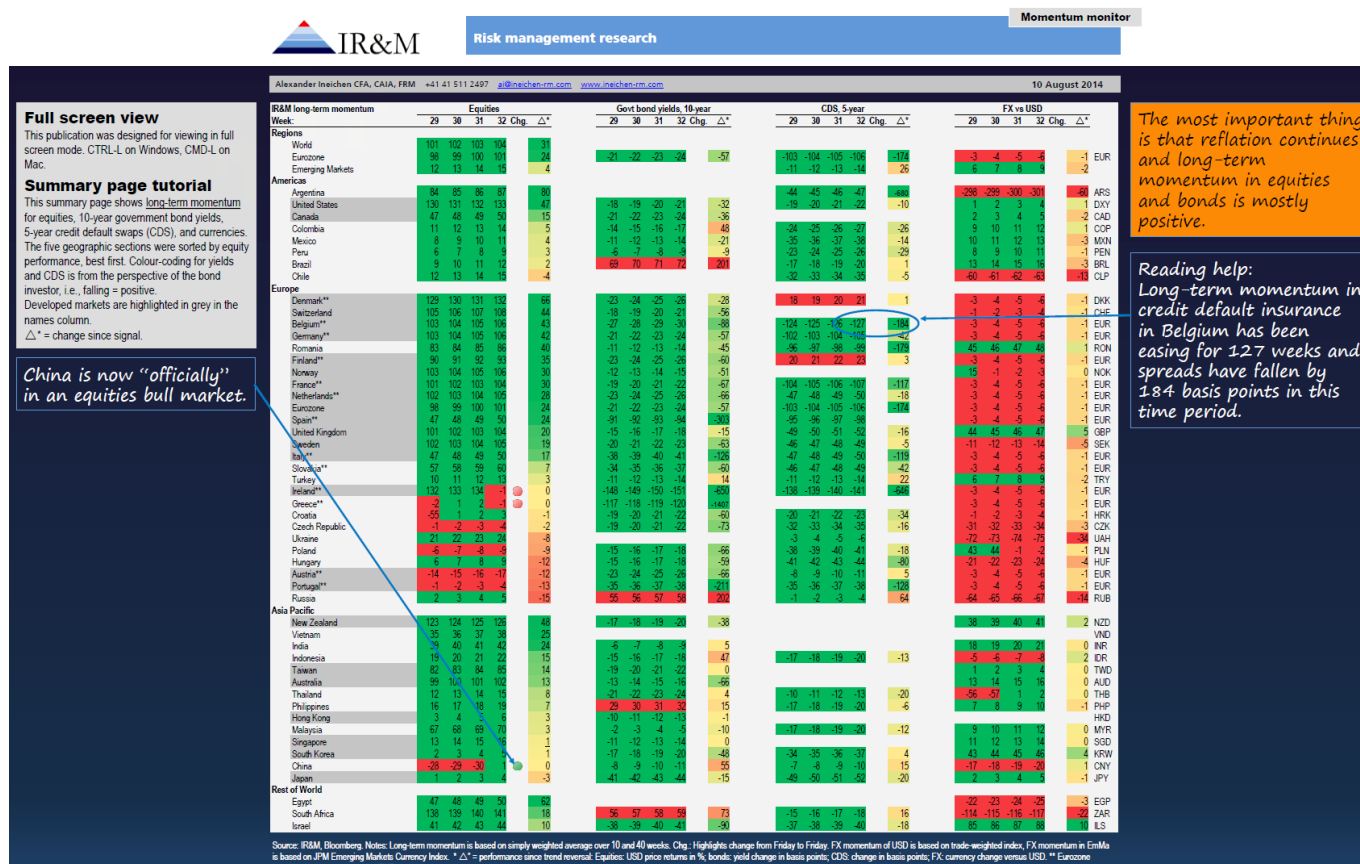
The basic premise of momentum is that trends exist, i.e., there are cycles as opposed to complete randomness, and that trends are

determinable in real time, but the duration of the trend is nearly impossible to predict. Price momentum is the most common form of momentum, is well documented, and has stood the test of time. For late U.S. investor Martin Zweig (1942-2013), not going against the trend was a cardinal rule: "To me, the 'tape' is the final arbiter of any investment decision. I have a cardinal rule: Never fight the tape!" Going against the trend is akin to fighting an uphill battle; the odds are against you.

Exhibit 1 shows a screen shot from IR&M's Momentum Monitor from 10 August 2014. The monitor shows positive and negative price momentum. (Positive momentum is here defined as the 10-week moving average exceeding the 40-week moving average and the momentum in the exhibit is measured in the number of weeks since the signal occurred. For example: The positive momentum in the MSCI World Index (first line) was in its 104th week in the 32nd week of 2014, resulting in a return of 31% since the signal occurred.)

Another example is China and Greece. China ended a 30-week bear market and entered a long-term bull market in week 32, as highlighted in Exhibit 1. The Greek stock market entered a long-term bear market around the same time. At the end of June 2015, these trends were still in place. From the time of the signal to the end June 2015, the Shanghai Composite gained 91% and the Athens SE General lost 24%.

A trend such as these could always end tomorrow, in which case a response by the investor is required. However, these trends could last a lot longer too. The main point is that no forecasting is required for the odds of the investor to be stacked in his favour.



Although we all should have bought China A-shares and sold Greek stocks short in early August 2014, the main purpose of analyzing momentum is as a tool that adds systems and, ideally, an element of discipline to the investment decision-making process. Exhibit 1 from 10th August 2014 informed us that going forward we shouldn't be long Greece and shouldn't be short China. The risk management perspective is what not to do. The momentum analysis can add perspective from this angle.

Unfortunately, the analysis of price momentum does not tell us how long a trend lasts. One reason why knowledge of the trend is still valuable is because trying to forecast the reversal is such a foolish endeavour. Mean reversion is a powerful concept in finance. However, the nowcasting approach suggests measuring the reversion in real time, rather than hoping for it, or trying to forecast it. Here's what we know when it comes to a trend, for example, the current bull market of the U.S. stock market: We know it's a bull market. We know—and this is important—that we don't know when it ends. Exhibit 2 shows the frequency distribution of U.S. bull markets of the S&P 500 price index since 1930. (We also know it's an exceptional, liquidity-induced bull market.)

There were 50 bull markets as per our definition. The median duration of a long-term bull market is 54 weeks, i.e., roughly one year. 25 were 54 weeks or shorter and 25 bull markets were 55 weeks or longer than that. The current bull market was its 179th week as per Friday 26th June. How many times has the reader heard someone say the bull market is about to end during these 179 weeks? At the end of the bull market someone will eventually get it right by pure coincidence.

The current bull market could last a lot longer. Who knows? There is no limit to the time axis in Exhibit 2. The practical relevance is that one ought to be less risk averse in a bull market. In a bear market, bad news can have a large impact on price. This is different in a bull market. In a bull market, bad news might cause

small corrections that are used by the bull crowd to add stock in a generally rising market at lower prices. In a bear market this is much less likely to occur. After a long and/or violent bear market, at one stage unknowable without the benefit of hindsight, “bottom fishing” normally kicks in. However, we do not know when. When focusing on nowcasting rather than forecasting, i.e., astronomy rather than astrology; we do not need to know. We will be able to determine when the bottom fishers have become a force to be reckoned with, i.e., we can measure the price reversal, as with the Chinese stock market in week 32 of last year.

Economic Momentum

The best way to think about economic momentum is with a sailing analogy in combination with Minsky's instability idea.² Every sailor knows that a storm requires a different trim than calmer weather. IR&M's gauge for economic momentum (the thin red line in Exhibit 3) is designed to indicate whether the economic environment is calm or a storm is brewing. The key is not to predict the next storm, but to respond when circumstances start changing. Rough weather at sea doesn't change from one minute to the next. The same is true for a change of the economic winds; normally. There is time to trim the sails. In finance this means being more conservative or hedged when things start to change for the worse, i.e., the red line in the chart starts to fall. The storm's zenith or magnitude and potential damage cannot be predicted in a continuous and robust fashion. However, changing circumstances can be measured and assessed at all times, making decision making more robust and therefore, in our view, more intelligent. The practical relevance to Minsky's instability hypothesis is that, both at sea and in economics, the current calm is nothing else than the build-up of the next storm.

At the time of writing economic momentum in Germany was positive, an export-driven economy benefiting from a currency that was too weak. The practical implication is that the “economic wind” is blowing from behind.

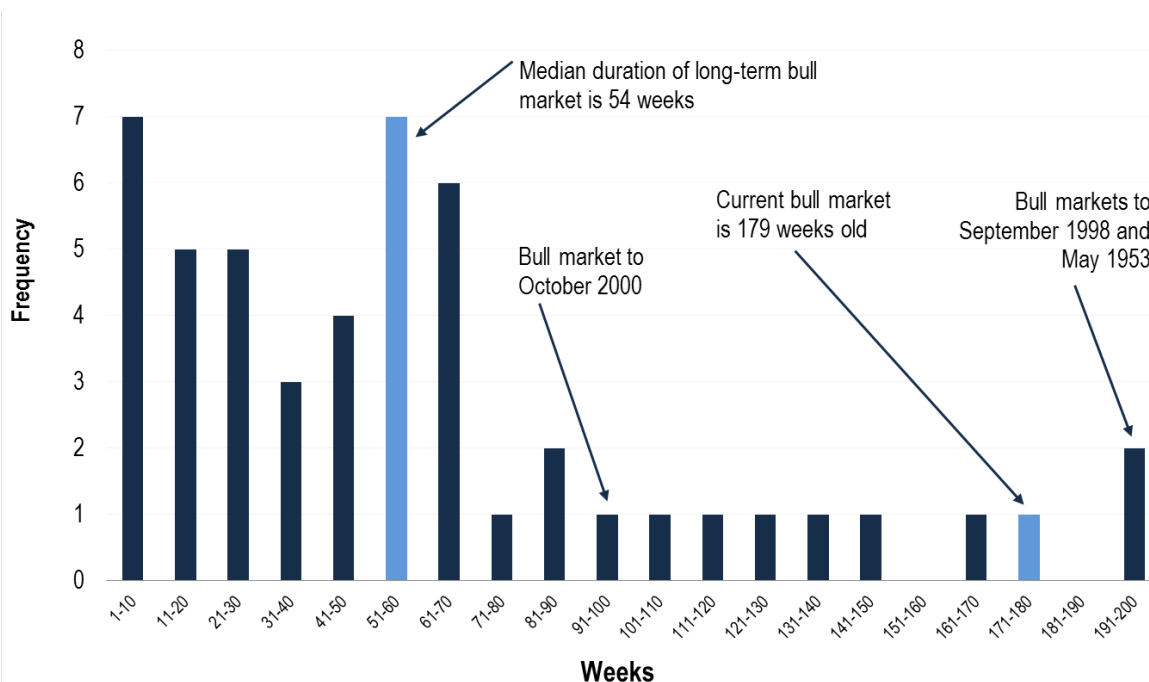


Exhibit 2 Duration of positive long-term trends* in weeks since 1930 (S&P 500)

Source: IR&M, Bloomberg

* Long-term trend as defined in IR&M's momentum monitor publication.

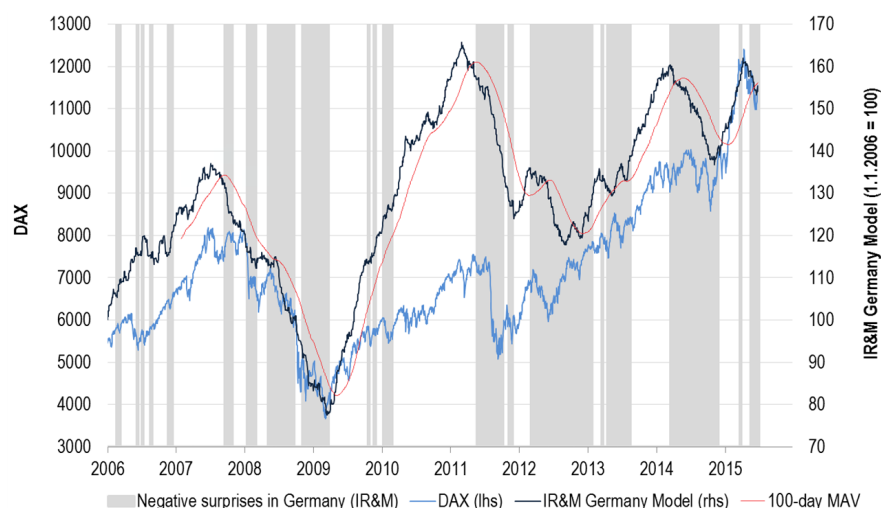


Exhibit 3 IR&M Germany (economic) model with DAX Index (as of 26th June 2015)

Source: IR&M, Bloomberg

There always will be a next recession, in Germany and elsewhere. However, when economic momentum is positive, the likelihood of a recession within, say, a year is lower than if economic momentum were negative.

One aspect of economic modelling and an economic momentum approach is that it fails with, or doesn't capture (or is slow to capture), political intervention. Monetary policy has "gained" as a market force under Alan Greenspan and has become more important ever since. Various central banks are battling a currency war; a *race to the bottom*, as some pundits put it. A central bank is not independent but is a part of the administration; it's a political authority. (Central banks are independent in a sense that, if, for example, they run out of paper-clips, they can restock without involving the legislature officially.)

Below earnings momentum is discussed. Earnings momentum is essentially the bottom-up counterpart of the top-down economic momentum idea just discussed.

Earnings Momentum

The third part of the nowcasting toolkit is earnings momentum and is based on consensus earnings estimates from sell-side analysts. The preferred measure is the estimates for the next twelve months on a rolling basis, always hoping that the data provider gets the aggregation right. When looking at estimates it is important to distinguish between fact and opinion, i.e., nowcasting and forecasting. Earnings estimates falling from, say, 100 to 99 is a *fact*, but the "99" itself is an *estimate* and therefore subject to error. By comparison, 99 being lower than 100 is not subject to error.

Earnings momentum in the U.S. and Japan was mostly positive since the end of 2012. The subsequent USD returns of these equity markets to the end of June 2015 were 50% and 35% respectively. Earnings momentum in the Eurozone was flat and the USD return in this time period was 21%. Earnings momentum in the UK was the worst and was mostly negative and the USD

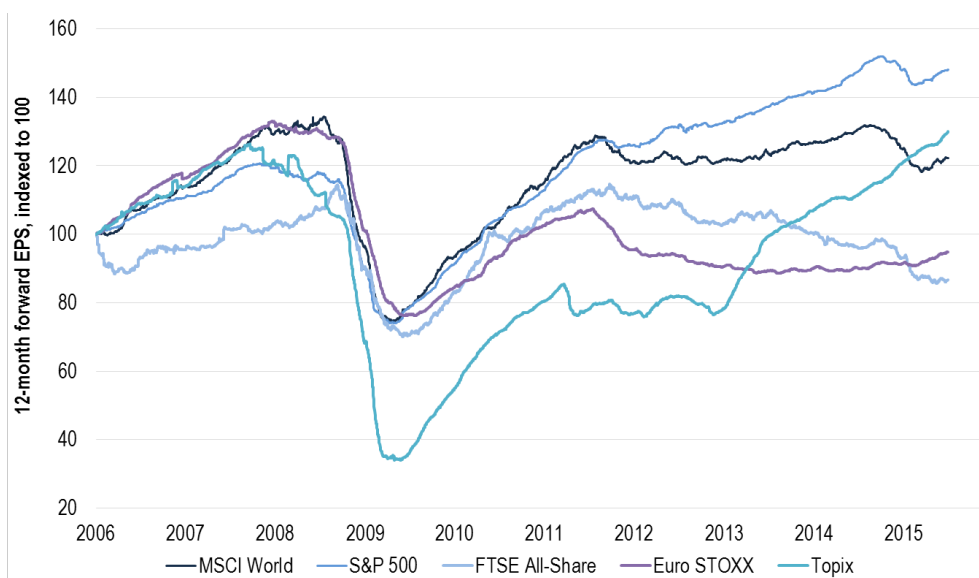


Exhibit 4 Twelve-month forward consensus earnings estimates indexed to 100 as of January 1, 2006 to June 30, 2015)

Source: IR&M, Bloomberg

return was 16%. This means in the U.S. and Japan, the multiple expansion was accompanied by an additional power boost from rising earnings (estimates). This was not the case in the Eurozone, where a price rise was pure multiple expansion. In the UK, falling earnings estimates were an outright negative, working against the multiple expansion. See Exhibit 4. This means the ranking of the earnings momentum, something that can be determined in real time, is very close to the ranking of the subsequent stock market performance.

Earnings momentum can also be applied to sectors. It allows the investor to distinguish in which sector the wind is coming from the rear and where there's a head wind, i.e., the earnings trend is negative and multiple expansion therefore more difficult. In Exhibit 5 a ranking system is used based on the ten GICS (Global Industry Classification Standard) sectors of S&P 500 Index series. First, the long-term momentum of every sector is ranked at the end of a quarter based on the number of weeks since the momentum signal occurred. The second part of the exhibit shows the rank of the subsequent 6-month total return. For example, at the end of March 2010, Consumer Discretionary was ranked 1st in terms of long-term momentum. The rank of the subsequent 6-month total return of Consumer Discretionary from April to September 2010 was 3rd.

No tool is perfect. However, the worst four sectors in terms of earnings momentum (Energy, Utilities, Telecom, and Materials) were also the worst four in terms of performance (second line in Exhibit 5). The important practical aspect is that no forecasting on the part of the investor was required. These rankings are not someone's opinion, even if the underlying consensus earnings estimates are estimates. These rankings were determinable in real time; no crystal ball was required. Note that the best three sectors (Consumer Discretionary, Health Care, and Consumer Staples) were also top-ranked in terms of performance, i.e., ranked 2nd, 1st, and 4th.

Sector earnings momentum also allows us to make inferences as to which countries are likely to underperform.³ The UK is a case in point. It has been underperforming the U.S. for quite a while. The UK has no IT, but Energy and Materials, whereas the U.S. has a large weight in IT. The absolute returns of two countries and therefore the relative performance are a function not only of country-specific factors. The sector weights matter too.

This is especially true when correlation among sectors is low. The odds based on sector momentum were stacked against the UK outperforming the U.S., which it subsequently didn't.

Closing Remarks

There are many definitions for risk. Since the financial crisis, we all know that it has very little to do with VaR (value at risk). One definition for risk that works well for pragmatists and is applicable to the nowcasting approach is the following:

$$\text{Risk} = \text{exposure to change}^4$$

This definition is very simple and unscientific, but very powerful and has stood the test of time. Risk measurement deals with the objective part. The risk measurer either calculates bygone risk factors, simulates scenarios, or stress tests portfolios based on knowledge available today according to an objective set of rules. Any assessment of risk is based on knowledge that is available today. Risk, however, has to do with what we do not know today. More precisely, risk is exposure to unexpected change that could result in deviation of one's goals (such as meeting future liabilities, for example). By definition, we cannot measure what we do not know ahead of time. We are free to assume any probability distribution, but that does not imply an objective assessment of risk. The best we can do is to determine the change in real time, i.e., nowcasting.

	Rank long-term momentum of forward earnings estimates										Rank subsequent 6-month total return									
	Cons Disc	Mate	Indu	Fina	IT	Ener	Tele	Util	Cons Stap	Health Care	Cons Disc	Mate	Indu	Fina	IT	Ener	Tele	Util	Cons Stap	Health Care
Average*	1.0	7.0	7.0	5.0	5.4	7.9	7.5	7.7	4.0	2.0	4.4	5.7	5.6	5.6	5.1	6.7	6.1	6.4	5.6	3.7
Rank**	1	7	6	4	5	10	8	9	3	2	2	7	4	6	3	10	8	9	4	1
03-2010	1	5	9	6	4	6	10	8	3	2	3	6	5	10	8	7	1	2	4	9
06-2010	1	5	8	6	4	6	9	10	3	2	4	1	5	8	6	2	3	9	7	10
09-2010	1	5	8	6	4	6	9	10	3	2	4	2	3	5	6	1	7	10	9	8
12-2010	1	5	8	6	4	6	9	10	3	2	4	8	5	10	9	2	7	3	6	1
03-2011	1	5	8	6	4	6	9	10	3	2	6	9	7	10	5	8	4	1	2	3
06-2011	1	5	8	6	4	6	9	10	3	2	6	9	8	10	3	7	4	1	2	5
09-2011	1	5	8	6	4	6	10	9	3	2	3	5	4	1	2	6	9	10	8	7
12-2011	1	6	4	8	9	5	10	6	3	2	4	8	7	2	3	10	1	9	6	5
03-2012	1	6	4	8	9	5	10	6	3	2	5	7	9	10	8	6	1	4	3	2
06-2012	1	8	4	6	5	7	10	8	3	2	2	3	4	1	9	5	8	10	7	6
09-2012	1	8	4	5	7	9	6	10	3	2	4	7	3	1	10	8	9	6	5	2
12-2012	1	9	6	4	7	10	5	7	3	2	2	10	5	3	9	8	6	7	4	1
03-2013	1	7	9	4	6	10	5	8	3	2	1	6	2	4	5	7	10	9	8	3
06-2013	1	10	8	4	6	9	5	7	3	2	4	2	1	7	3	6	10	9	8	5
09-2013	1	10	8	4	6	9	5	7	3	2	9	3	4	5	2	8	10	6	7	1
12-2013	1	9	8	4	6	10	5	7	3	2	10	5	9	7	4	2	8	1	6	3
03-2014	1	9	8	4	6	10	5	7	3	2	7	5	9	6	1	10	3	8	4	2
06-2014	1	8	7	3	5	10	4	6	9	2	5	9	7	4	3	10	8	6	2	1
09-2014	1	8	7	3	5	10	4	6	9	2	2	8	6	7	5	10	9	4	3	1
12-2014	1	7	6	3	4	10	9	5	8	2	2	3	7	6	4	9	5	10	8	1
03-2015	1	7	6	3	4	10	9	5	8	2	5	4	7	1	3	9	6	10	8	2

Exhibit 5 Rank of earnings momentum vs. rank of subsequent 6-month return in the 2010s in the U.S.

Source: IR&M, Bloomberg

Subsequent 6-month returns following 31 Dec 2014 are to 12 June 2015.

* Average rank over period shown.

** Rank of average rank over period shown.

There is a saying that “a fool with a tool is still a fool.” This adage is highly applicable to the world of finance. Models and tools are imperfect and they misfire. However, an imperfect tool can be useful for the bottom line. A tool need not be perfect, nor does it need to stand alone. We believe a tool can be imperfect and be very useful by supplementing other analysis. The future is probabilistic; Grexit, Frexit, and Brexit might or might not occur, and —if they do occur—they might or might not have a material impact on one’s portfolio. If a tool helps us to tweak our portfolio towards the probabilities being asymmetrically skewed in one’s favor; the tool adds value.

Examining price, economic, and earnings momentum are such tools. They are imperfect and should be used in conjunction with other analysis. However, these tools are good enough to attract the attention of both relative return and absolute return investors. The tools are battle-tested.

A further argument is simplicity. The world is not just probabilistic, it is complex too. We ought to simplify to understand what is going on. Most of the risk management literature is about risk measurement, not management. This was most likely a contributing factor of financial institutions becoming too comfortable with their risk measurement approaches prior to the 2008 financial crises. The mathematical complexity resulted in a communications gap between senior management and the risk measurement department, while the pseudo precision resulted in overconfidence in one’s own ability to control the situation. The momentum approach discussed herein is simple; it’s essentially red or green, and it’s unambiguous. There are no various shades of grey.

Risk is exposure to change. Nothing lasts forever. The situation will change eventually. Forecasting the change is a mug’s game. Applying nowcasting as a risk management tool allows the investor to spot the change in real time, will elevate the investor’s conviction in the change, and will therefore result in more disciplined and robust—and therefore more intelligent—decision making.

Endnotes

1. Ineichen, Alexander (2015) “Nowcasting and financial wizardry,” Risk Management Research, IR&M, January.
2. See Minsky, Hyman P. (1992) “The Financial Instability Hypothesis,” The Jerome Levy Economics Institute Working Paper No. 74 (May).
3. See Ineichen, Alexander (2015) “Sector momentum,” Risk Management Research, IR&M, June.
4. This definition is from the education materials of Chicago-based options trading boutique *O’Connor* in the late 1980s.

Author’s Bio



Alexander Ineichen, CAIA
Founder
Ineichen Research & Management AG

Alexander is the founder of Ineichen Research and Management AG, a research firm founded in October 2009 focusing on risk management, absolute returns, and thematic investing.

Alexander started his financial career in derivatives brokerage and origination of risk management products at Swiss Bank Corporation in 1988. From 1991 to 2005 he had various research functions within UBS Investment Bank in Zurich and London relating to equity derivatives, indices, capital flows, and alternative investments, since 2002 in the role of a Managing Director. From 2005 to 2008, he was a Senior Investment Officer with Alternative Investment Solutions, a fund of hedge funds within UBS Global Asset Management. In 2009, he was Head of Industry Research for the hedge fund platform at UBS Global Asset Management.

Alexander is the author of the two publications “In Search of Alpha: Investing in Hedge Funds” (October 2000) and “The Search for Alpha Continues: Do Fund of Hedge Funds Add Value?” (September 2001). These two documents were the most-often printed research publications in the documented history of UBS. He is also author of “Absolute Returns: The Risk and Opportunities of Hedge Fund Investing” (Wiley Finance, October 2002) and “Asymmetric Returns: The Future of Active Asset Management” (Wiley Finance, November 2006). Alexander has also written several research pieces pertaining to equity derivatives and hedge funds including AIMA’s Roadmap to Hedge Funds (2008 and 2012), which has been translated into Chinese and was the most-often downloaded document from their website at the time.

Alexander holds a Bachelor of Science in Business Administration with a major in general management from the University of Applied Sciences in Business Administration Zürich (HWZ) in Switzerland. Alexander also holds the Chartered Financial Analyst (CFA) and Chartered Alternative Investment Analyst (CAIA) designations and is a certified Financial Risk Manager (FRM). He is on the Board of Directors of the CAIA Association.