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2nd December 2013

The turtle and the hare

"You can't win without an edge, even with the world's greatest discipline and money management skills. If you don't have an edge, all that money management and discipline will do for you is guarantee that you will gradually bleed to death. Incidentally, if you don't know what your edge is, you don't have one."

- Jack Schwager, 'Market Wizards', quoted in a Cambridge Trading Research presentation.

Of all the stories in the history of markets, that of 'the turtles' may well be the most intriguing. In 1983, commodities trader Richard Dennis set out to show that anybody could trade profitably provided they were taught some simple rules. His partner, William Eckhardt, disagreed – and a wager was born. (If this sounds familiar, it should be. It forms the basis of the plot to John Landis' 1983 comedy, 'Trading Places'.) Dennis placed classified ads in the financial press soliciting trainee traders - no experience required. Successful applicants were subsequently taught some basic rules about risk management and trend-following. These aspirant traders were called 'turtles' after Dennis' experience of seeing a Singaporean turtle farm, and his belief that successful traders could be "grown" just like those turtles. 21 men and two women were hired over the next two years in two separate programmes. Long story short, many of 'the turtles' went on to become multi-millionaires.

Not only that, but some of 'the turtles' went on to join the ranks of the most successful traders in history. Chris Clarke of Cambridge Trading Research has compiled a list of some of the most profitable trading funds over the very long term. One of his requirements for a fund to qualify for inclusion on this list was to have a 20-year-plus track record. Of the top 30 funds by this criterion, nine of them are run by 'turtles'. A further six are other trend-following funds. (Three managers were excluded from the list: David Tepper, who just failed to make the cut on the grounds of "only" having a 19-year track record for the Palomino Fund B Class; Warren Buffett, who is arguably not a trader; and Renaissance Technologies' Jim Simons, on the grounds of having lots of separate funds, all of them highly secretive.) Perhaps there's something to this trend-following story after all ?

So what did Dennis teach 'the turtles' ? Michael Covel covers the basics of the 'turtle trading' system. Richard Dennis believed that a successful trading philosophy could be taught to anybody provided they kept to the rules. Dennis himself borrowed $400 from his father and by the early 1980s had amassed a fortune of $200 million. As his father famously observed,

"Let's just say Richie ran that $400 up pretty good."

The basic 'turtle' rules involved entering trades on the basis of markets breaking out from previously established ranges. If a given futures market traded at a new 20-day high, then it should be bought. If it traded at a new 20-day low, it should be sold. Stop losses were included for hedging downside risk. Risk per transaction was also carefully controlled. 'The turtles' were allowed to trade a variety of US futures markets, including interest rates, currencies, energies, metals and commodities (hard and soft). Futures markets were favoured due to their depth and liquidity. Whereas most fund managers try and predict the future, 'the turtles' simply paid attention to the market price. For as long as price trends persisted and they weren't stopped out, they would add to their positions (subject to obeying the rules about appropriate position sizing). If 'the turtles' lost money, they would have to reduce their bet size until they'd brought their account back into the black.

There are really only two ways of looking at financial markets. One of them is fundamental: to take into consideration macro-economic themes, the economy, interest rates, inflation. The other is technical: what are prices doing ? The City tends to favour fundamental analysis; the problem here being that fundamental analysis is inherently subjective. The reality, which Dennis recognised, is that price is the only metric really worth trusting – everything else is a matter of opinion. This trading strategy today goes by the name 'systematic trend-following'. Unlike many approaches to trading, it requires no special understanding of any given market – just a healthy respect for the price action. And there are two specific reasons why we look favourably on systematic trend-following funds. One is that they have a long history of generating attractive returns. The second is that whatever their future return streams, those returns can be confidently expected to come with roughly zero correlation to the stock market. Which makes them the perfect investment vehicle to sit within a properly diversified portfolio alongside the likes of stocks, bonds and real assets.

Systematic (i.e. non-discretionary) trend-following funds have had a disappointing run over the last couple of years, leading some to suspect that the model is broken. Put in a longer term context, recent disappointing returns are nothing that the industry hasn't seen before. AQR Capital Management recently published a research note 'A century of evidence on trend-following investing' which modelled a simple time series momentum strategy across a number of asset classes, from January 1903 to June 2012. To be realistic, they made deductions for transaction costs and fund management fees. The results are shown below.

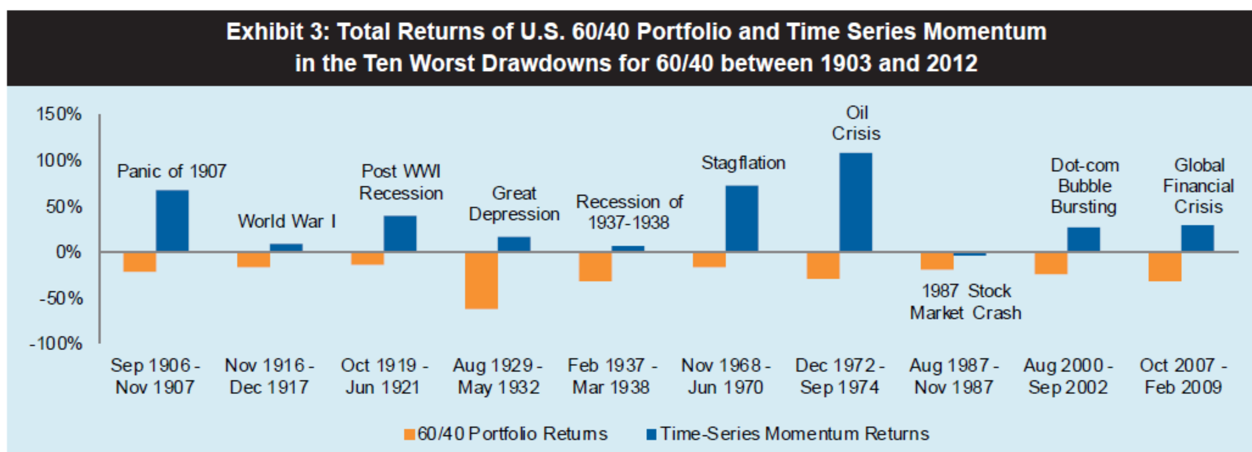
Exhibit 1: Hypothetical Performance of Time Series Momentum

Strategy performance after simulated transaction costs both gross and net of hypothetical 2-and-20 fees.

Time Period	Gross of Fee Returns (Annualized)	Net of 2/20 Fee Returns (Annualized)	Realized Volatility (Annualized)	Sharpe Ratio, Net of Fees	Correlation to S&P 500 Returns	Correlation to US 10-year Bond Returns
Full Sample:						
Jan 1903 - June 2012	20.0%	14.3%	9.9%	1.00	-0.05	-0.05
By Decade:						
Jan 1903 - Dec 1912	18.8%	13.4%	10.1%	0.84	-0.30	-0.59
Jan 1913 - Dec 1922	17.1%	11.9%	10.4%	0.70	-0.12	-0.11
Jan 1923 - Dec 1932	17.1%	11.9%	9.7%	0.92	-0.07	0.10
Jan 1933 - Dec 1942	9.7%	6.0%	9.2%	0.66	0.00	0.55
Jan 1943 - Dec 1952	19.4%	13.7%	11.7%	1.08	0.21	0.22
Jan 1953 - Dec 1962	24.8%	18.4%	10.0%	1.51	0.21	-0.18
Jan 1963 - Dec 1972	26.9%	19.6%	9.2%	1.42	-0.14	-0.35
Jan 1973 - Dec 1982	40.3%	30.3%	9.2%	1.89	-0.19	-0.40
Jan 1983 - Dec 1992	17.8%	12.5%	9.4%	0.53	0.15	0.13
Jan 1993 - Dec 2002	19.3%	13.6%	8.4%	1.04	-0.21	0.32
Jan 2003 - June 2012	11.4%	7.5%	9.7%	0.61	-0.22	0.20

Source: AQR.

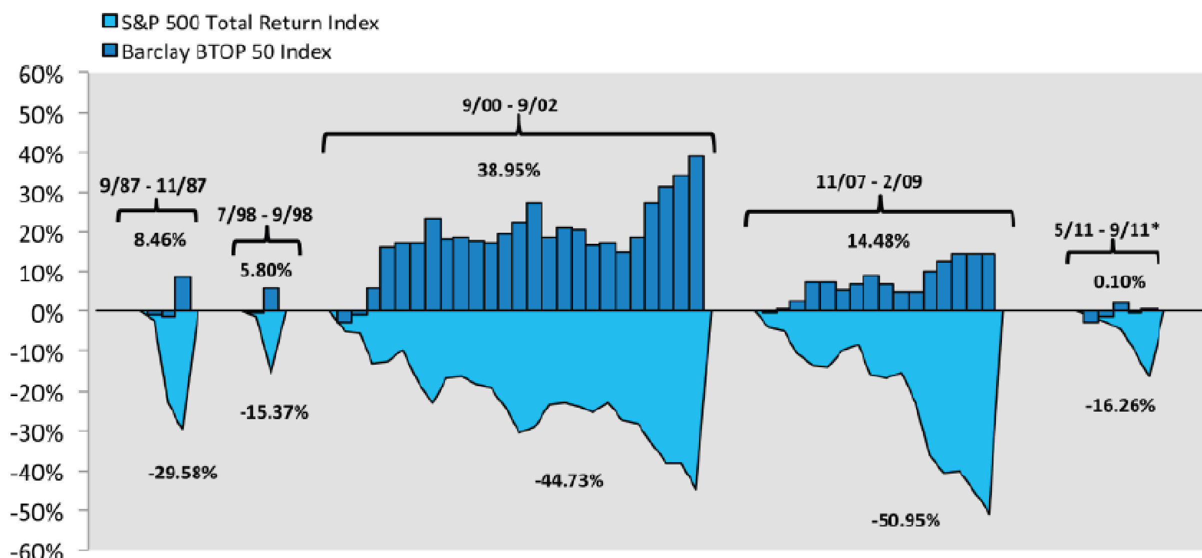
AQR also plotted the returns of this simple time series momentum strategy against the returns of a 60/40 portfolio (with 60% of the portfolio invested in the S&P 500 equity index and 40% invested in 10 year US government bonds, rebalanced back to 60/40 at the end of each month, and with no fees or transaction costs deducted from the portfolio's returns). Those results are shown below.



Source: AQR. Time Series performance is hypothetical as described above.

Note that in 9 of the 10 worst drawdowns for the 60/40 ("conventional") portfolio over the last century, the naïve trend-following portfolio made a positive return. This itself is a variation on a more recent theme, as shown in Barclay Hedge data covering actual trend-following funds (the dark blue bars below) during the worst periods for the US equity markets (the light blue areas below) since 1987. In all of those bear market experiences, trend-followers made money.

Trend-followers versus the S&P 500 Index during the S&P 500's worst five drawdowns since 1987



Source: Barclay Hedge

AQR concede that

"Following very strong performance in 2008, trend-following strategies have experienced a few drawdowns [peak to trough declines] from 2009-2012."

Does this mean that the strategy is broken or that the current environment is one in which trend-following no longer "works" ? They also published data covering the 10 largest drawdowns from their hypothetical century-long model:

Exhibit 5: The 10 Largest Drawdowns of Time Series Momentum between 1903 and 2012

The 10 largest peak-to-trough drawdowns of the time series momentum strategy, calculated using net of fee returns.

Rank	Start of Drawdown (Peak)	Lowest Point of Drawdown (Trough)	End of Drawdown (Recovery)	Size of Peak-to-Trough Drawdown	Peak-to-Trough Length (Months)	Trough-to-Recovery Length (Months)	Peak-to-Recovery Length (Months)
1	Mar-1947	Dec-1948	Mar-1954	-26.3%	21	63	84
2	May-1939	Jun-1940	Jul-1941	-20.7%	13	13	26
3	Oct-1913	Mar-1914	Oct-1914	-15.2%	5	7	12
4	Feb-1937	Apr-1937	Dec-1937	-14.4%	2	8	10
5	Oct-1916	Apr-1917	Nov-1917	-13.8%	6	7	13
6	Feb-2009	Jun-2009	Jul-2011	-13.5%	4	25	29
7	Jul-1910	May-1911	Dec-1912	-11.3%	10	19	29
8	Nov-1956	Mar-1957	Jul-1957	-11.2%	4	4	8
9	Oct-2001	Apr-2002	Jul-2002	-10.8%	6	3	9
10	Dec-1907	May-1909	Jul-1910	-10.4%	17	14	31

Source: AQR. Time Series performance is hypothetical as described above.

Their assessment ?

"When evaluated in this long-term context, the drawdowns experienced within the past three years do not look unusually large. While recent strategy performance has been disappointing, we do not find any evidence that the recent environment has been anomalously poor for the strategy relative to history."

Or in other words, we are seeing nothing today that we haven't seen before, or will again. For systematic trend-following funds to "work" requires ultimately just two things, in our view: greed and fear on the part of other investors. As the market oscillates between those two extremes, prices form trends, the direction and intensity of which reflect which emotion has the upper hand over investors' psychology. Increased assets under management by the industry may also have played a role in recent performance, but we find it difficult to believe that that role is really life- (or performance-) threatening. Barclay Hedge estimate that assets managed by systematic trend-followers account have grown to or over approximately $260 billion as at 2012. If that sounds like a lot, it is just over half the market capitalisation of Apple Inc.

There are other reasons to find systematic trend-following appealing. If macro fundamentals were ever easy to read, they are almost impossible to read now. The extent of central bank intervention and attendant distortion of asset prices is off the charts. In trying to navigate these treacherous markets, trend-followers with sound risk management seem like ideal companions to us. Unlike conventional fund managers, these traders pursue strategies that are immune to emotion and the vagaries of market forecasting and herd thinking: they simply trade the price, whatever it is.

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2nd December 2013.

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