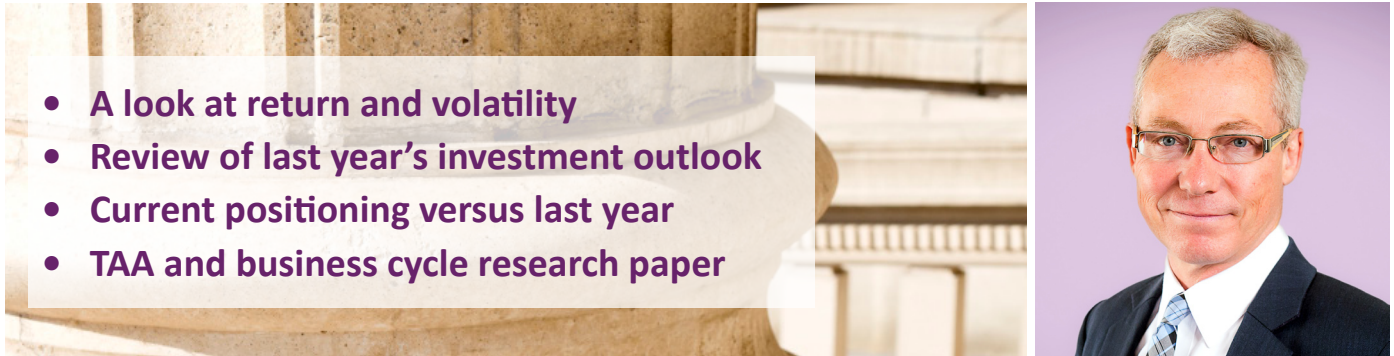


Peter Elston: Investment Letter

Issue 21: January 2017

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Data as at 31.12.2016

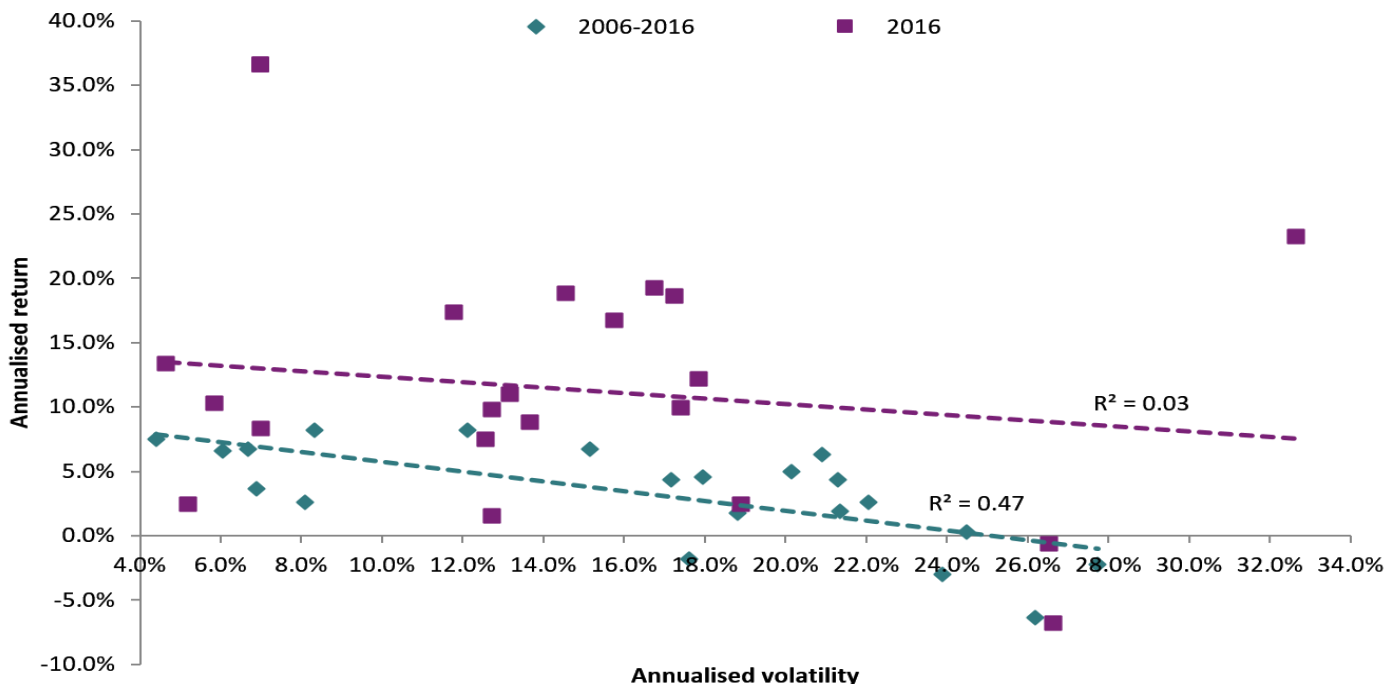


A look at the relationship between return and volatility

It is generally agreed and understood that to enjoy higher returns over the longer term one must accept higher levels of volatility in the shorter term. One of the most interesting features of the last ten years has been the breakdown in this relationship.

The below scatter chart shows the relationship between volatility (x-axis) and return (y-axis) for a range of asset classes for two periods: the last year (CY2016) and the last ten years (2006 to 2016). It also shows the best fit line for both periods, together with the correlation statistics (R-squared) for each. Please note that each dot refers to a particular asset class. Also that I have not labelled each dot because a) it would clutter the chart and b) the emphasis is on the general relationship rather than the specifics (Table 1 further on presents the detailed underlying numbers for each of the asset classes depicted in the below chart).

Chart 1: Return versus volatility for a range of asset classes



Source: Seneca Investment Managers & Bloomberg

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Multi-Asset Value Investing

There are two key parameters to note for each of the two series (periods): the slope of the best fit line and the correlation. The slope defines the relationship between return and volatility (i.e. whether it is positive or negative) while the correlation statistic defines how well the data fits the relationship.

It is not too surprising that over one year there is neither a positive relationship between return and volatility, nor a high level of correlation (in fact the R-squared of 0.03 says that there is none whatsoever!) However, it is interesting to note that over ten years there is an inverse relationship between return and volatility and that the correlation is quite high. This is completely at odds with the aforementioned generally accepted positive relationship between return and volatility. What on earth is going on?!

The table below shows the return and volatility statistics for the various sub asset classes used in the above chart. They have been sorted by 10 year volatility-adjusted return (proxy for the Sharpe Ratio).

Table 1: Volatility and return statistics for a range of asset classes (sorted by 10 year “Sharpe” in descending order)

Asset class	Sub asset class	Currency	1 year (2016)		10 years (2006 - 2016)		
			Volatility*	Return*	Volatility*	Return*	Ret / vol
Risky bonds	US HY (BB)	Local	5%	13%	4%	8%	1.73
Risky bonds	Europe HY	EUR	3%	8%	5%	5%	1.14
Safe haven bonds	Global govt (10y+)	Hedged	7%	8%	6%	7%	1.08
Risky bonds	US HY (B)	Local	6%	17%	6%	6%	1.05
Risky bonds	Emerging markets	USD	6%	10%	7%	7%	1.01
Risky bonds	US HY (<=CCC)	Local	7%	36%	8%	8%	0.97
Safe haven bonds	Global inflation (10y+)	Hedged	11%	19%	9%	7%	0.81
Safe haven bonds	UK govt (15y+)	Local	15%	19%	12%	8%	0.68
Alternatives	Hedge funds	USD	5%	2%	7%	4%	0.54
Safe haven bonds	US govt (20y+)	Local	13%	1%	15%	7%	0.44
FX	FX (non GBP)	USD	12%	17%	8%	3%	0.32
Equity	US	Local	13%	11%	21%	6%	0.30
Alternatives	Enviro opps	USD	13%	12%	20%	5%	0.27
Equity	Asia ex Japan	Local	13%	7%	18%	5%	0.25
Equity	Emerging markets	Local	13%	10%	17%	4%	0.25
Equity	UK	Local	17%	19%	20%	5%	0.25
Alternatives	Infrastructure	USD	14%	12%	18%	4%	0.22
Commodities	Precious metals	USD	17%	10%	21%	4%	0.21
Property	US REITs	Local	17%	9%	37%	5%	0.14
Alternatives	Listed private equity	EUR	18%	12%	22%	3%	0.12
Commodities	Agriculture	USD	14%	9%	19%	2%	0.09
Equity	Europe ex UK	Local	19%	2%	21%	2%	0.09
Equity	Japan	Local	27%	-1%	24%	0%	0.01
Property	UK REITs	Local	27%	-7%	28%	-2%	-0.08
Commodities	Composite	USD	16%	17%	18%	-2%	-0.10
Commodities	Industrial metals	USD	17%	18%	24%	-3%	-0.13
Commodities	Energy	USD	33%	23%	26%	-6%	-0.24
Alternatives	Alternative energy	USD	18%	-21%	30%	-8%	-0.26

* annualised

Source: Seneca Investment Managers & Bloomberg

Here are some observations:

- There are in total nine bond-related sub-asset classes and they are all in the top 10 by 10 year volatility-adjusted return
- Volatility of risky bonds has on the whole been lower than that of safe haven bonds
- US high yield has produced some very impressive volatility-adjusted returns over the last ten years
- US high yield (<=CCC) had a fantastic 2016, generating a return of 36% with annualised volatility of just 7%
- Equity markets generally appear in the lower half of the table, with some markets such as Japan and Europe ex UK producing miserable volatility-adjusted returns
- Of all the equity regions, the US's numbers are the most impressive, but they are still not great – the 6% return over the last 10 years is lower than the 9.5% one has seen over the last 30 years
- The bottom of the table is generally occupied by commodities and other “non-traditional” asset classes such as REITs, listed private equity and infrastructure

One important point to note is that neither FX exposure nor commodities are likely over the long term to produce high volatility adjusted returns. FX returns are essentially a zero-sum game – for example, when a Yen-based investor who is holding Sterling wins, a Sterling-based investor holding Yen loses. There is a small net positive utility in holding foreign exchange since a 10% gain for one investor is a 9% loss for the other - the average for the two is thus +0.5%. Once one takes account of the relatively high volatility of FX spot rates, one can understand that volatility-adjusted returns over time will be poor (one can also understand why FX hedging can make so much sense).

As for commodities, there is little reason why over the long term their prices should rise more than the prices of other goods and services. If you own Nickel for example and are not doing anything with it, you are firstly not generating an income and secondly you are paying for storage (not directly but via losses incurred at futures contract rollover). In other words there is little reason why commodities prices should rise in real terms over the long term (this is indeed the case in practice as well as theory). The volatility of commodities prices is even higher than for FX exposure (as can be seen in the above table) and so volatility-adjusted returns over time will tend to be even worse.

What this all means is that there are some sub asset classes which fail in both theory and practice to adhere to the aforementioned positive relationship between return and risk. Notwithstanding this, over the last ten years, weird things have been happening between risky bonds and safe haven bonds and between bonds in general and equities.

My own conclusions from the above observations are fairly simple: over the next ten years, returns from safe haven bonds will be poor, returns from risky bonds will be moderate, and returns from equities will be moderate to good. I might get excited about commodities or FX if they are close to long term lows on an inflation adjusted basis, but this is not generally the case at the moment (Sterling on a real effective basis is now trading close to all-time lows but it is possible nay probable that Brexit will keep it there for the time being). The inflation-adjusted oil price is well below its long term trend but as with Sterling there are structural issues that may keep it there.

In my next letter I will go into more detail with respect to our 2017 macro and market outlook.

Review of last year's investment outlook

This time last year I wrote, “We believe on balance that the world will continue to grow in 2016, that equity market valuations by and large are low enough to make positive returns likely, and that western government bonds remain overvalued.”

Notwithstanding sterling's weakness during the year, most equity markets around the world posted decent returns, with the MSCI AC World Net Local index itself returning 9.0%.

As for safe haven bonds, they proceeded over the first nine months of the year to become even more overvalued, with the yield on the Barclays World Inflation Linked Bonds index falling from 0.0% to -1.0%. The last three months of the year saw real yields rise, though only back to -0.7%.

I also wrote last year that, “High yield bond spreads have moved out, which given our expectation of future growth means this is an attractive area for us.” High yield spreads in both the US and Europe fell significantly during the year (in the US from 660 to 409bps and in Europe from 460 to 334bps). Returns will also have been boosted by the falls in government bond yields.

So, overall, I'd give our predictions a B+, which I would downgrade a notch or two for not gauging Brexit to be more likely. Nevertheless, our three public funds all had reasonable years, and all three now look very good based on volatility-adjusted total returns over five years (the income fund and the trust both look very good based on unadjusted total returns).

Our new investment process that we introduced in April 2015 is coming up to two years old, and it has undoubtedly been helping to improve our investment proposition. We remain completely committed to our unique style, Multi-Asset Value Investing, and its core principle that buying things cheaply will tend to produce good investment performance over time.

Current positioning versus last year

Our funds’ tactical asset allocation positioning is very close to where it was this time last year, which means our views on the various asset classes in which we invest have not changed much. This to a degree is to be expected – our asset allocation approach seeks to identify business cycle inflection points which don’t by their very nature come along very often. And although inflation is now rising in many countries, I think the end of the current cycle is some way off, though for some – the US being a good example – it is closer than others.

Table 2: Seneca funds’ SAA and TAA weights

Asset class	CF Seneca Diversified Income (OEIC)			CF Seneca Diversified Growth (OEIC)			Seneca Global Inc & Growth (Investment Trust)		
	SAA	TAA target		SAA	TAA target		SAA	TAA target	
		Dec 15	Dec 16		Dec 15	Dec 16		Dec 15	Dec 16
UK equities	22.5	23.5	25.5	20.0	21.0	23.0	35.0	30.0	31.5
Overseas equities	17.5	18.5	17.5	40.0	41.0	40.0	25.0	32.0	31.0
Safe haven bonds	12.5	0	0	4.5	0	0	4.5	0	0
HY bonds	17.5	26.0	25.0	8.0	10.0	8.0	8.0	7.6	5.5
EM bonds	5.0	5.0	5.0	2.5	2.0	2.0	2.5	0	1.5
Specialist assets	25.0	25.2	23.0	25.0	25.0	24.0	25.0	28.4	26.0
Cash	0	1.8	3.0	0	1.0	3.0	0	2.0	3.5
TOTAL	100	100	100	100	100	100	100	100	100

Source: Seneca Investment Managers & Bloomberg

An interesting research paper about tactical asset allocation and the business cycle

I recently came across a paper written in 2008 by Robeco’s Pim van Vliet and David Blitz entitled “Dynamic Strategic Asset Allocation: Risk and Return across Economic Regimes”. Those of you who have been following us for the last couple of years (or longer!) will know that our approach to tactical asset allocation is centred around analysis of the business cycle. While van Vliet and Blitz make a distinction between tactical asset allocation and what they call “dynamic strategic asset allocation”, they can in this instance be considered the same thing (they are both seeking to optimise in relation to a static strategic asset allocation though in slightly different ways).

The paper’s analysis focuses solely on the US but considers a reasonably wide range of asset classes: equities (large, small, value & growth), Treasuries, credit, commodities, and cash over 60 years. The authors use four indicators to define the business cycle: credit spread (difference between the Baa and Aaa spreads), earnings yield (E/P ratio of the S&P500), the ISM manufacturers’ survey production index, and the seasonally adjusted U.S. unemployment rate. They then assign each month of the indicator to one of four phases of the business cycle (expansion, peak, recession or recovery) depending on whether it is high and rising (expansion), high and falling (peak), low and falling (recession). Finally, they consider the performance of each of the aforementioned asset classes in each of the four phases and build recommended portfolio weightings for each phase for each asset class in relation to a fixed strategic asset allocation (the objective of the Dynamic Strategic Asset Allocation is to optimise both return and volatility in each of the four phases). The results are summarised in the table on the next page.

Table 3: Strategic asset allocation weights and recommended weights during each business cycle phase

%		Equity	Value	Growth	Small	Credits	Bonds	Comm	Cash	Total
SAA		25	5	5	5	5	25	5	25	100
Recommended Weight (Dynamic SAA)	Expansion	39		5			21	10	25	100
	Peak	19	10		10		31	5	25	100
	Recession	20	10		9		27		34	100
	Recovery	18	10		10	10	19	10	23	100

Source: Seneca Investment Managers & Bloomberg

As for returns of each asset class in each of the four phases (as well as over all phases), they are summarised below. Note that returns are stated as excess returns in relation to cash.

Table 4: Excess returns of each asset class in each phase as well as over all phases

	Equity	Value	Growth	Small	Credits	Bonds	Comm	SAA	DSAA
All phases	5.6	6.4	4.7	6.6	0.5	0.6	1.3	2.9	3.4
Expansion	3.7	3.2	3.9	0.9	-1.0	-0.4	5.7	1.8	2.4
Peak	0.2	1.9	-1.6	2.9	-3.0	0.1	-0.2	0.5	1.0
Recession	10.2	11.1	9.0	12.7	1.6	1.4	-3.7	4.8	5.0
Recovery	5.1	7.1	3.3	9.4	3.0	1.2	6.1	3.4	4.1

Source: Seneca Investment Managers & Bloomberg

There are numerous interesting features of the above two tables as well as of other parts of the study:

- It appears that recommended weights do not differ that much from SAA weights. This is because the study imposes tracking error limits. Increasing tracking error limits would increase the size of positions in relation to SAA.
- Although equity returns are below average during expansion phases (3.7% during expansion versus 5.6% for all phases), the model still recommends overweighting equities (44% total versus SAA total equities of 40%).
- This is because returns from other asset classes during expansion phase are also below average (e.g. bonds negative 0.4% versus +0.6% for bonds during all phases).
- Although equity returns are best during the phases 'recession' and 'recovery', the model still recommends underweighting them in relation to SAA.
- In fact, the model also underweights equities during the 'peak' phase as well, so equities are underweighted in three of the four phases.
- This is because the model is seeking to optimise in relation to volatility as well as return (models that optimise for return only will overweight equities during the phases 'peak' and 'recovery').
- It should also be noted that the model makes material shifts between 'large', 'small', 'value' and 'growth' during the four phases, even though overall equity recommended weights do not move far from SAA weight.
- An allocation to credits is recommended in one phase only: 'recovery'.
- The strong performance of credit in recent months and years on both sides of the Atlantic suggests that we may still be in 'recovery' phase, though inflation data suggests the US is closer to 'expansion' than Europe.
- It may well be time given the various conclusions of the paper to be moving out of credit, at least in the US (note the strong performance in 2016 of CCC credits mentioned earlier in this letter). The question is, what should one move into? Emerging market debt might be one option, particularly since there tends to be a positive correlation between emerging markets and commodities, which tend to do well during the 'expansion' phase that we may well be moving into in the next year or so.

- As the paper notes, “most assets exhibit above-average returns during recessions and recoveries and below-average returns during expansions and peaks”. Although in some ways this is counter intuitive, it is also generally understood that risky assets tend to anticipate good times (expansions and peaks) well in advance i.e. they perform well during recessions and recoveries (bad times).
- Many other studies use NBER data to define different phases of the business cycle which is problematic because such data is only available ex post. This study on the other hand uses four indicators that are available ex ante, and is thus one that has more practical application for asset allocators.

Those wishing to take a closer look at the paper can find it [here](#).

Important Information

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Seneca Global Income & Growth Trust plc

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