THE **CAMBRIDGE** WEEKLY

1 July 2019

Lothar Mentel

Lead Investment Adviser to Cambridge

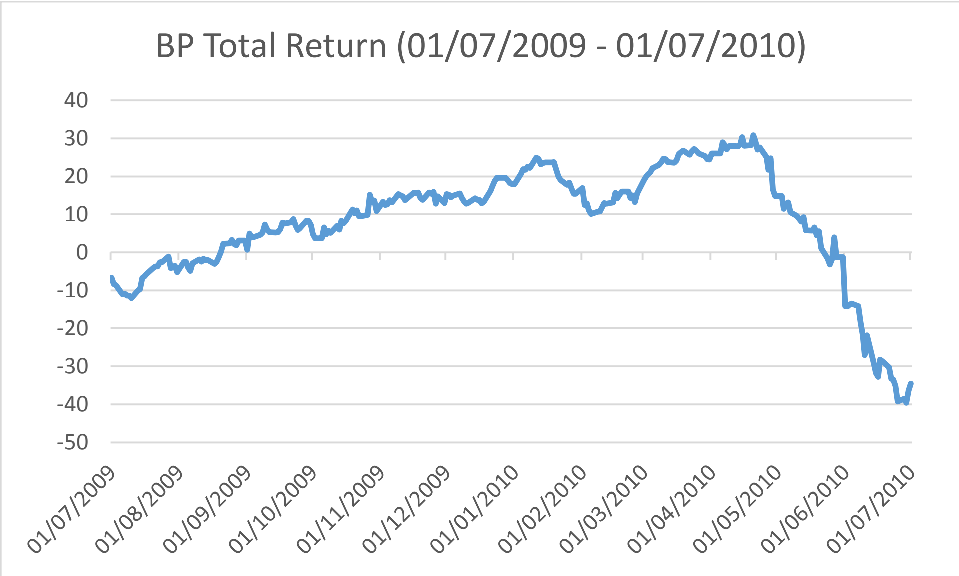
The tortoise cracks the egg – what's real diversification?

'Don't put all your eggs in one basket' is a phrase we hear time and time again. Although useful in explaining the concept to clients, it's not really helpful in explaining *why* we seek to diversify and how it works in practice. As such, most of us know we shouldn't just hold one stock, or even one index, as its too risky.

Investment is always uncertain, and we buy multiple assets in order to 'diversify' or spread the risk on the basis that risk events don't always coincide across all assets at the same time. However, what if this is done naively and the asset we buy to diversify isn't actually all that different from the other assets we already own?

To illustrate the point with a hypothetical example, let's assume an investor decides to invest solely in BP back in 2009.

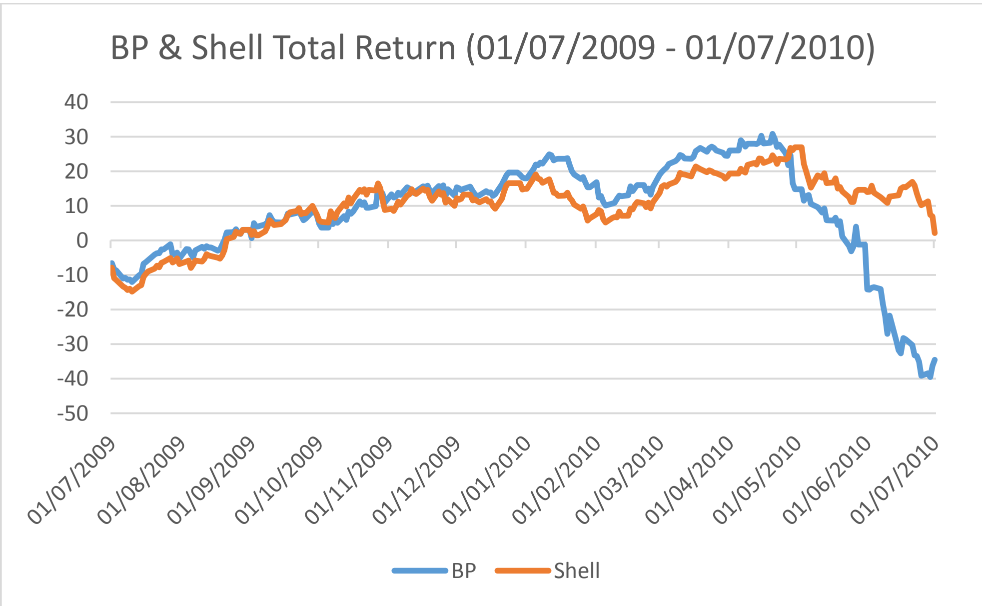
www.cambridgeinvestments.co.uk | enquiries@cambridgeinvestments.co.uk
Tel : 01223 365 656 | CB1 Business Centre, 20 Station Road, Cambridge, CB1 2JD



Source: Bloomberg

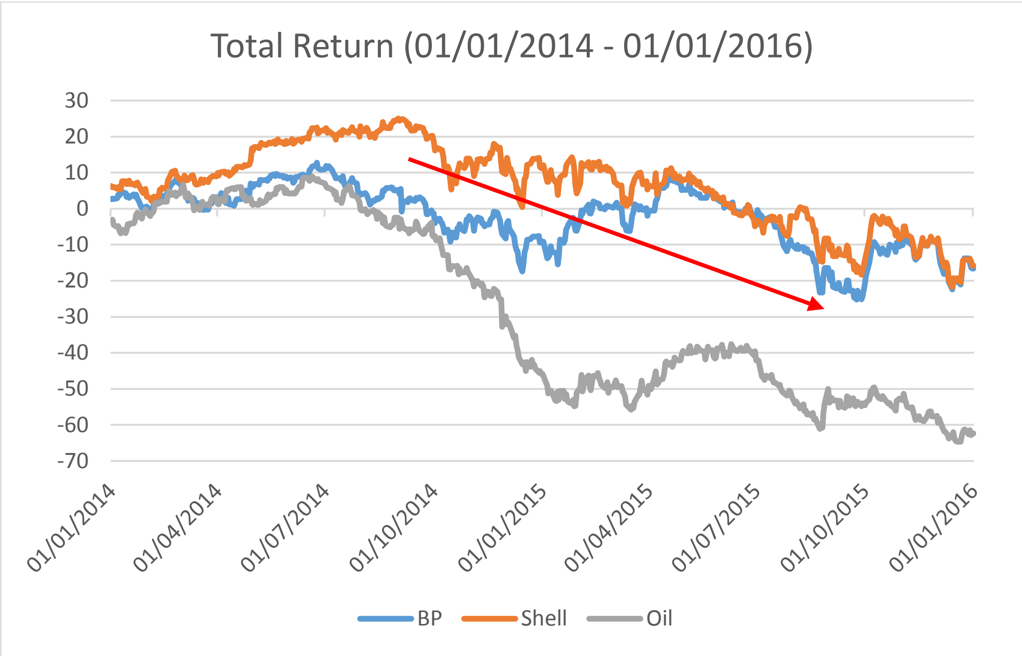
For the first 9 months they do incredibly well and generate a total return of 30%, however, for stock specific reasons (the Deepwater Horizon oil spill) the bottom falls out of their basket and they end up losing 40% over the year.

Now, with the benefit of hindsight they repeat the process, but this time spread their risk by investing in two companies; BP and Shell. They fare better this time round, the peak of their total return is slightly worse (+29%) but the trough is far better, ending the year just 20% down.



Source: Bloomberg

Assuming this is a better approach, the investor maintains this strategy over the longer term. This time however, a different problem rears its head. Although BP and Shell are somewhat diversifying in terms of stock specific risk, they're both highly sensitive to many of the same things. In this case, oil. The dramatic oil price falls over 2014 & 15 causes the investor with a two-stock portfolio to lose roughly 35% over the course of a year from their peak portfolio value.



Source: Bloomberg

Finally, the investor decides to diversify by investing into multiple UK sectors, hoping to avoid stock specific and sector specific risk (e.g. commodity price sensitivity). But again, this works for a while until Brexit or another UK specific event derails all UK sectors in tandem.

The true aim of diversification is to minimise concentration or overexposure to the same sources of risk, be that stock, sector, country, asset class, liquidity or investment style specific (plus many others). Not only long-term persistent drivers of risk but potential sources of risk that are unforeseen or haven't existed historically, regulatory changes for example or trade tariffs impacting all exporters.

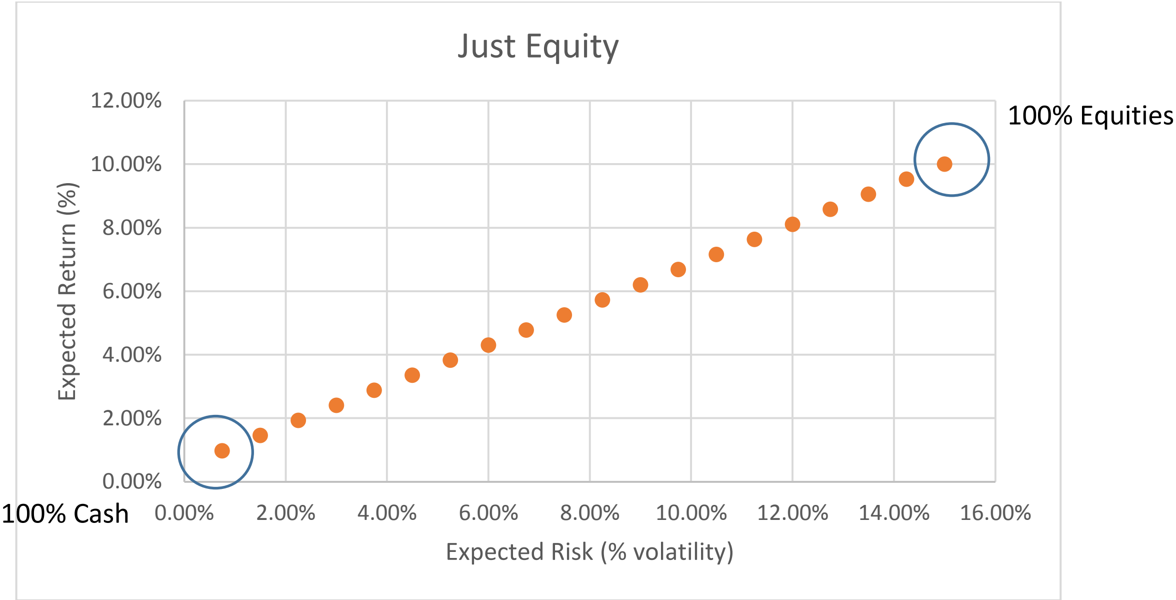
What we actually mean with the eggs and basket analogy is don't put all your eggs in one basket, and make sure the baskets are made of different materials, and if possible the baskets should be in different geographic locations, or maybe not baskets at all… but that's not quite as catchy.

We should point out at this stage that diversification is not designed to improve or diversify returns, but to lower the risk of a portfolio for the same level of return. It improves the quality of returns.

The expected return of a portfolio is simply a weighted average of the expected returns for each asset you own. If the expected returns on all assets is the same, your portfolio expected returns will be the same, irrespective of whether you hold one or all of them.

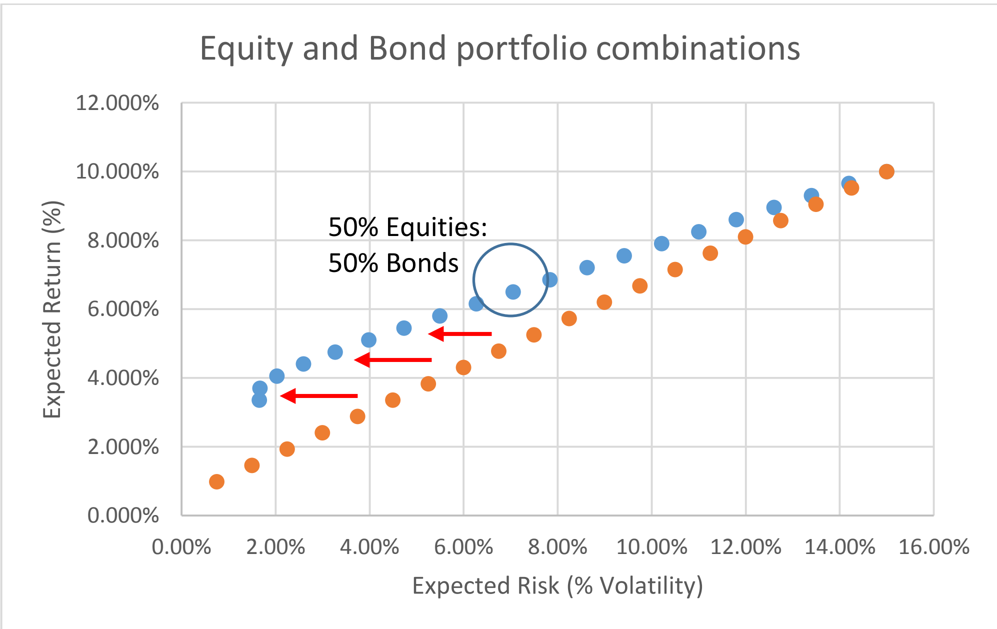
The maths involved in calculating expected risk of a portfolio is relatively complicated, but the key is correlation (i.e. the extent to which two things move together). The lower the correlation of two assets, the less they move together and the better they diversify each other. As noted above, the correlation does nothing to the expected returns.

If we invest in just one asset class, for example equities, then the relationship between risk and return is linear. If we want higher returns, we buy more equities and both risk and return increase in stepwise 1:1.



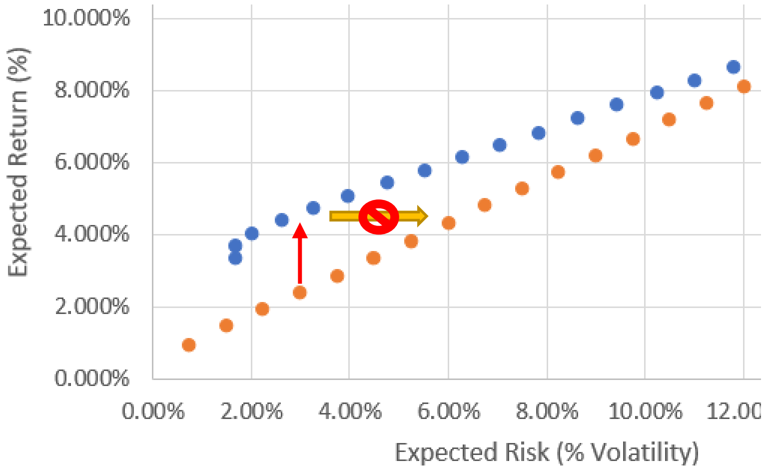
Expected risk and return relationship for investing in equities vs cash.

However, when we introduce other assets into the mix that are not perfectly correlated to the assets already present, e.g. equities vs. bonds, the relationship becomes non-linear and we create portfolios that have a lower expected risk without having to reduce the expected returns. The portfolio becomes more efficient.



In the stylised chart above we can see that the introduction of bonds allows the risk of each portfolio to be reduced for the same level of expected returns. The fact that the two assets don't tend to move in tandem allows the portfolio to achieve a similar level of returns over the long term but the ride along the way is less bumpy.

We realise this chart can be interpreted in the opposite direction; i.e. more returns can be generated for the same level of risk. This is the primary philosophy behind funds such as Standard Life GARS. Care should be taken to not put too much faith in the stability of low correlation, however, just because two assets don't move in tandem today doesn't mean they always won't.



If the correlation of assets increases, the benefits of diversification disappear. Unfortunately, this tends to occur in periods of stress. The portfolio we created to behave well under normal circumstances suddenly has far more risk than we thought, and everything moves down together. The portfolio we squeezed to generate as much returns as possible suddenly suffers a much greater drawdown than the investor expected.

In summary, we aim to truly diversify a portfolio – spreading the sources of risk and smoothing the delivery of returns. Diversification can be done in a naïve way, simply adding more assets to the portfolio without taking correlation into consideration. This only serves to avoid certain types of risks not all, and the resultant portfolio is unlikely to weather all storms over the longer term.

Diversification can also be achieved by introducing assets which have had a low correlation historically. Unfortunately, this low correlation may have been simply a matter of circumstance or due to a lack of pricing frequency. As we describe below, we believe Real Estate, Private Equity and Infrastructure all fall into this category. When the going gets tough their diversification benefits are likely to be lost and the portfolio will prove to have held more specific risk than history would suggest.

The final method of diversification, and what we aim to achieve at Cambridge, is true diversification – identifying assets that generate returns from alternative sources of risk. The potential for high correlation is considered for every new addition. Risk sources can include insurance premia, economic growth, rates sensitivity or manager strategy to name just a few. As they are driven by different factors, these sources of returns are unlikely to react in the same way over both the long term and under stressed scenarios – hopefully allowing the efficiency of each portfolio to remain on track.

Unfortunately, this level of diversification comes with a downside. There are periods of time when it pays to be less diversified. We've all heard stories of the investor that made millions by buying one great stock. Having a large exposure to the US, to the Technology sector, to high yield bonds or to managers with a bias towards the quality growth style would have allowed a portfolio manager to perform very well over the past couple of years. Not being well diversified can get better results over the short term, but for every gambler that backs the winner there are many more that lose out. Such concentration to single sources of risk is not the way we manage portfolios. We won't keep up with the latest fad, but we won't suffer terribly when it falls out of favour either. Unforeseen events tend to appear quickly and act even faster. Trying to alter exposures once the risk arises is akin to shutting the stable door after the horse has bolted.

The difficulty with this approach is that from a behavioural finance point of view, clients see under-performance in a rising market as a missed opportunity. They compare the performance of their portfolio to less diversified peers and ask why we didn't have more of the same. Conversely, in a falling market peer comparison becomes irrelevant. Clients only care that their portfolio is down 5%, not that peers are down 10%. Nobody comes and asks for a well-diversified portfolio; they all want a winning portfolio. However, we believe that over the longer term the winner will be the more diversified - the tortoise wins, not the hare.

Weaponising the US dollar – unintended consequences

Controlling a state's ability to trade has been used for centuries in international disputes. As the world economy has grown blockading a neighbouring state has moved on to sophisticated targeted sanctions on sections of a nation's economy or its leaders. For example, this week President Trump enacted sanctions that prevent Iran's top officials from accessing financial instruments and in particular US dollar assets – once again weaponising the dollar.

The US can use its currency as political weapon by exploiting its status as the global reserve currency. Iranian power brokers do not hoard the Iranian rial, they hoard the US dollar.

Using the US Dollar as a weapon in this week's sanctions underlines its power to inflict economic harm against Trump enemies but Trump, like the US economy needs the US dollar to be strong for its modern weaponisation to be effective. We have written in the past about the unforeseen harm on US manufacturing of Trump's economic sanctions. We think it's worth exploring any unforeseen consequences for the US dollar and currency markets of Trump's sanctions, political and economic, for both his or future US administrations to address.

We highlighted Iran because this is not the first time the US has targeted Iran by using the US dollar, and there are some lessons to be learned about how that played out.

In February 2012, under the Obama administration the US banned Iran from the US dollar payments systems. This was initially awkward rather than crippling for Iran. Initially, it circumvented the ban by converting payments to Euros and settling transactions via SWIFT (The Society for Worldwide Interbank Financial Telecommunication). To close the loophole the US pressured SWIFT to ban Iran from its payment systems. Implemented in 2013 the eventual SWIFT ban allowed the sanctions to work.

As a leading oil exporter Iran required access to payments systems to receive US dollars for the oil it exported. It was also a major importer of products such as food and consumer electronics. Suddenly being frozen out of the payment system it had no way to pay for its imports or get the money due for its exports. The result was hyperinflation, economic collapse, banks runs and scarcity of goods.

However, Iran responded to its inability to use US dollars by buying gold. The effect was that a major trading nation had effectively found a way to get around the US dollar to create global trade.

India, a major oil importer, implemented an oil-for-gold swap, whereby India would buy gold on the global markets and swap it with Iran for oil. Then Iran could swap gold with the likes of China and Russia for food or goods. Thus, gold once again proved to be a store of value, or in other words, money. Given what the US has implemented on Iran other countries during this period such as China, Russia, India and Turkey talked about building a non-dollar-based banking and payments systems in Asia.

The US has downplayed the risk of this non-dollar-based banking and payments systems being enacted. A key tenant of its thinking is that countries would not engage in this move as it would produce massive losses on their own US dollar portfolios – think China and the amount of US Treasury debt it currently holds. But this view may be misplaced. The potential move away from a non-dollar-based system is driven by the threat that actions by the US could impose fundamental economic damage on their economies.

Iran has shown there are tools out there that could protect other countries reserves such as converting to gold. According to Bloomberg, central banks and sovereign wealth funds have brought more gold bullion in the last year than at any time since 1971. But there are also other alternatives to consider. Last week we noted the potential development of Facebook's Libra which follows on from the evolution of Bitcoin. But beyond these new potential digital currencies the market still has a further option of the International Monetary Fund (IMF) world money, the special drawing rights, or SDRs.

The US needs to maintain the US dollar as the dominant global currency, yet the combative Trump administration could unwittingly make sidestepping the US dollar easier and signal a more structural trend in global currency. The consequences of sanction nations being forced to sidestep the US dollar normalises what started out as emergency measures.

One day in the future could we be looking back and seeing these tariffs and sanctions as the beginning of a fundamental shift for the currency markets? The fundamental question for the US? If its economic power needs a global US dollar, what if the global economy does not need the US dollar?

In the near term, we have started to see a change in the outlook for the US dollar. The US dollar has recently struggled to break higher even in the face of growing uncertainties. It is also suffering from being both overvalued whilst speculators remain net long of the US dollar. This positioning is despite the US Federal Reserve dovish stance and signs that US growth is slowing whilst areas such as Europe may be stabilising albeit from a low base. These cyclical and more short-term factors suggest that the US dollar may struggle to rally in the near term even with a positive G20 meeting this weekend. This will leave both the Yen and the Euro as potentially stand in safe haven currencies if uncertainties increase.

CAMBRIDGE
INVESTMENTS LIMITED

1st July 2019

Global Equity Markets

MARKET	FRI, 16:30	% 1 WEEK*	1 W	TECHNICAL
FTSE 100	7434.1	0.4	26.6	→
FTSE 250	19461.4	0.7	136.8	→
FTSE AS	4060.6	0.4	15.5	→
FTSE Small	5568.4	-0.5	-29.1	→
CAC	5544.8	0.3	16.5	→
DAX	12404.6	0.5	64.7	→
Dow	26585.4	-0.5	-133.7	↗
S&P 500	2933.2	-0.6	-17.3	↗
Nasdaq	7662.3	-0.9	-66.5	↗
Nikkei	21275.9	0.1	17.3	→
MSCI World	2166.5	-0.5	-11.7	→
MSCI EM	1054.9	0.2	1.6	→

Global Equity Market - Valuations

MARKET	DIV YLD %	LTM** PE	NTM*** PE	10Y AVG
FTSE 100	4.8	17.6	13	13.3x
FTSE 250	3.4	24.3	13.7	14.1x
FTSE AS	4.5	18.5	13.1	13.4x
FTSE Small	3.8	47.7	15.9	14.1x
CAC	3.3	18.6	14.6	13.4x
DAX	3.2	16.4	13.6	12.6x
Dow	2.2	17	16.5	14.8x
S&P 500	1.9	19.3	17.7	15.9x
Nasdaq	1.0	24.5	21.5	17.9x
Nikkei	2.2	15.8	15.3	18.3x
MSCI World	2.5	18.2	16.3	15.2x
MSCI EM	2.7	13.8	13	12.1x

Top 5 Gainers / Top 5 Decliners

COMPANY	%	COMPANY	%
easyJet	8.1	Rightmove	-6.0
John Wood Group	6.7	Croda International	-5.0
TUI AG	6.0	Rolls-Royce Holdings	-4.4
3i Group	5.3	Tesco	-4.0
Burberry Group	4.5	Auto Trader Group	-2.8

Currencies / Commodities

PRICE	LAST	%1W	CMDTY	LAST	%1W
USD/GBP	1.27	-0.27	OIL	66.7	2.4
USD/EUR	1.14	0.07	GOLD	1411.1	0.8
JPY/USD	107.85	-0.49	SILVER	15.3	-0.4
GBP/EUR	0.90	-0.38	COPPER	270.3	-0.1
CNY/USD	6.87	0.02	ALUMIN	1790.0	0.5

Fixed Income

GOVT BOND	%YIELD	% 1W	1 W YIELD
UK 10-Yr	0.832	-1.5	-0.01
UK 15-Yr	1.187	1.4	0.02
US 10-Yr	2.003	-2.5	-0.05
French 10-Yr	-0.006	-112.5	-0.05
German 10-Yr	-0.329	-15.4	-0.04
Japanese 10-Yr	-0.158	-1.282	-0.002

UK Mortgage Rates

MORTGAGE BENCHMARK RATES	RATE %
Base Rate Tracker	2.57
2-yr Fixed Rate	1.66
3-yr Fixed Rate	1.80
5-yr Fixed Rate	1.98
Standard Variable	4.29
10-yr Fixed Rate	2.61

* The *% 1 week* relates to the weekly index closing, rather than our Friday p.m. snapshot values
** LTM = last 12 months' (trailing) earnings;
***NTM = Next 12 months estimated (forward) earnings

For any questions, as always, please ask!

If anybody wants to be added or removed from the distribution list, please email enquiries@cambridgeinvestments.co.uk

Please note: Data used within the Personal Finance Compass is sourced from Bloomberg/FactSet and is only valid for the publication date of this document.

The value of your investments can go down as well as up and you may get back less than you originally invested.

Lothar Mentel

www.cambridgeinvestments.co.uk | enquiries@cambridgeinvestments.co.uk
Tel : 01223 365 656 | CB1 Business Centre, 20 Station Road, Cambridge, CB1 2JD