STRUCTURED PRODUCTS ASSOCIATION
Investing with peace of mind

Monthly Market Report
May 2024

With commentary from David Stevenson

The rise of structured product EFTs

The structured product industry in the UK has undergone something of a renaissance over the last decade. As various industry reports suggest - Ian Lowes at StructuredProductsReview is perhaps the most vocal on this subject - the vast majority of plans have produced positive gains, with more and more plan providers offering ever greater choice for investors and advisers.

So far so good, but I've always sensed that there is a potential threat looming on the horizon as the vast exchange product funds industry starts to look at options-based structures. Over in the US listed structured products as ETFs (and ETPs and ETNs) have absolutely gone mainstream. As you'd expect with such a vast - and growing market - there are lots of different structures and outcomes being adopted, with two main broad groups: barrier products and call option based structures. The first category (barrier products) has mushroomed in popularity as investors fret about 'excessive' equity market valuations. The most popular product in this space seems to cap the upside and provides some protection on the downside unless the index falls by more than say 5 to 15% over the relevant period. In the latter category (call options structures) we've seen even more explosive growth with really mainstream fund managers such as JPMorgan muscling into the space. By far the most popular structure here is a classic equity index call overlay structure that generates a high income whilst capping some of the upside. Beyond these two broad categories, there's also a longer tail of what one could loosely call volatility protection strategies, sometimes marketed as tail risk products which produce a big payout if markets start to fall sharply.

To date, this huge listed defined outcomes/structured products spectrum of products hasn't had much impact on the UK market where adviser-based plans are still very much dominant. But the last year has seen the first big issues of options-based ETFs in the UK, from the likes of JPMorgan (in equity income using covered call writing). To date, this handful of funds hasn't generated much in the way of AuM but I suspect that may change. When I talk to ETF issuers in the UK almost everyone is now talking about, and developing internally, options-based ETFs. The classic autocall or kick out product doesn't tend to feature much in these conversations, so I think the 'traditional' structured products sector is safe for now, but I wouldn't be too complacent. ETF issuers need new ideas, especially ones where they can charge more than traditional passive core strategies and options-based ideas tick plenty of boxes.

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The Fab Four meet the Seven Wonders

The Magnificent Seven is now the Fab Four. According to the Wall Street Journal, the Magnificent 7 (29% of the market value) accounted for 37% of the YTD market return (of 10.16%) at the end of March, but a new Gang of Four (18% of the market) has emerged, as Nvidia, Microsoft, Meta Platforms (META) and Amazon.com, with their gains accounted for 47% of the YTD, left the remaining three in the dust (Tesla [TSLA] was down 29.3% YTD, the worst issue in the index, Boeing [BA] was the second worst, at -26.0% YTD, while Apple was down 10.9% YTD).

Over in Europe another gang of leviathans has been dominating returns. They've been called the Seven Wonders of Europe by analysts at SocGen - the term describes the seven stocks that have collectively driven over a third of the STOXX 600's performance since January 2020: Novo Nordisk, ASML, LVMH, SAP, Siemens, Schneider, and Hermes.

According to the SocGen analysts: "These stocks have seen remarkable growth since 2020, with an impressive return of over 155%, outpacing even the Nasdaq 100. Their weightage in the STOXX 600 has nearly doubled since 2020, and today stands at 13.6%. Their forward P/E ratio is currently 29.0x, which represents a 108% premium to the STOXX 600's average (13.8x). This substantial premium, almost four standard deviations above the historical average, underscores the current trend of overcrowding in these popular stocks."

US stocks aren't quite as expensive as some think!

Talk to most market cynics (a group that I usually hang out with), and they'll probably tell you that US equities are overvalued and in danger of veering into bubble territory. But I'm not entirely convinced that at an aggregate level, the US market, as measured by the benchmark S&P 500 index, is THAT overvalued. The table below from analysts at S&P Dow Jones shows a series of measures for valuations based on the S&P 500's PE ratio. As you can see, current levels are not out of whack with the 5- and 10-year averages. Not cheap, certainly, but in bubble territory, not quite!

S&P Dow Jones Indices			
S&P 500 HISTORICAL AVERAGE PRICE-TO-EARNINGS RATIO			
March 28, 2024: historical data for Q4 2023 and prior, forward based on Street estimates			
	OPERATING	AS REPORTED	
2025 Estimate, current price	19.19	20.96	
2024 Estimate, current price	21.87	24.09	
12 Mo Dec,'23, current price	24.61	27.31	
12 Mo Dec,'23 (Dec,'23 price)	22.40	24.86	
Average 5-Years	21.87	25.14	
Average 10-Years	20.72	23.59	
Average from 1988	19.27	24.26	
Average from 1936		17.66	

Measure	Values as of 14th March 2024	Values as of 12th April 2024
UK Government 10 year bond rate	4.07%	4.30%
GDP Growth rate YoY	-0.20%	-0.20%
CPI Core rate	4%	3.40%
RPI Inflation rate	4.90%	4.50%
Interest rate	5.25%	5.25%
Interbank rate 3 month	5.32%	5.30%
Government debt to GDP ratio	97%	97.10%
Manufacturing PMI	47.5	50.3

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Bank CDS options

Rates on swaps insuring against (major) bank bond defaults generally declined again over the last month although there most of the falls were fairly marginal. The same can be said for the handful of banks experiencing increased rates - JPMorgan, UBS and BNP Paribas, all saw very marginal increases in rates last month. We still seem to be firmly anchored in a low risk environment as far as the big banks are concerned.

Bank	One Year	Five Year	Credit Rating (S&P)	Credit Rating (Moody's)	Credit Rating (Fitch)
Santander	45.62	16.68	A+	A2	A -
Barclays	63.16	31.52	BBB	BAA1	A
BNP Paribas	36.16	13.76	A+	Aa3	A+
Citigroup	57.75	24.16	BBB+	A3	A
Deutsche Bank	99.32	41.89	A-	A1	BBB+
Goldman Sachs	60.73	27.8	BBB+	A2	A
HSBC	33.09	13.97	A+	A1	AA-
Investec	n/a	n/a	n/a	A1	BBB+
JP Morgan	41.21	22.14	A-	A1	AA-
Lloyds Banking Group	38.08	13.07	BBB+	A3	A
Morgan Stanley	57.25	26.63	A-	A1	A+
Natixis	36.5	16	A	A1	A+
Nomura	70.54	20.2	BBB+	BAA1	A-
RBC	51.64	33.4	AA-	A1	AA-
Soc Gen	44.36	18.48	A	A1	A-
UBS	40.7	24.34	A-	Aa3	A+

Source: Tempo Issuer & Counterparty Scorecards ('TICS') 1st April 2024 www.tempo-sp.com

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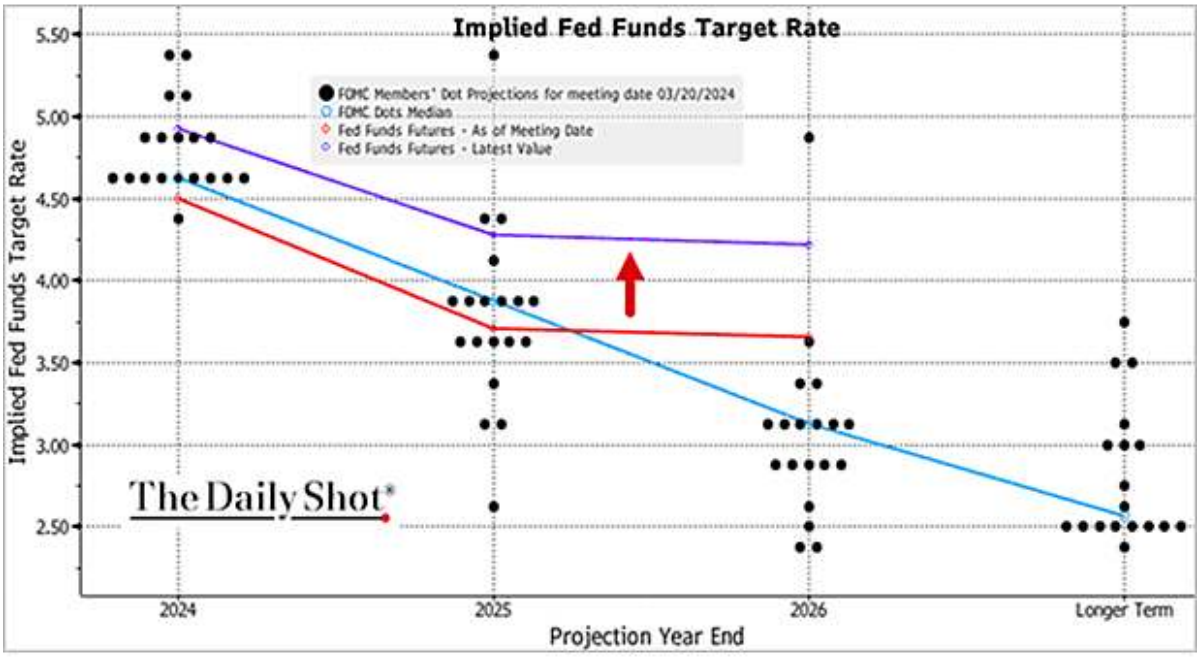
Government Bonds

Still Higher for Longer

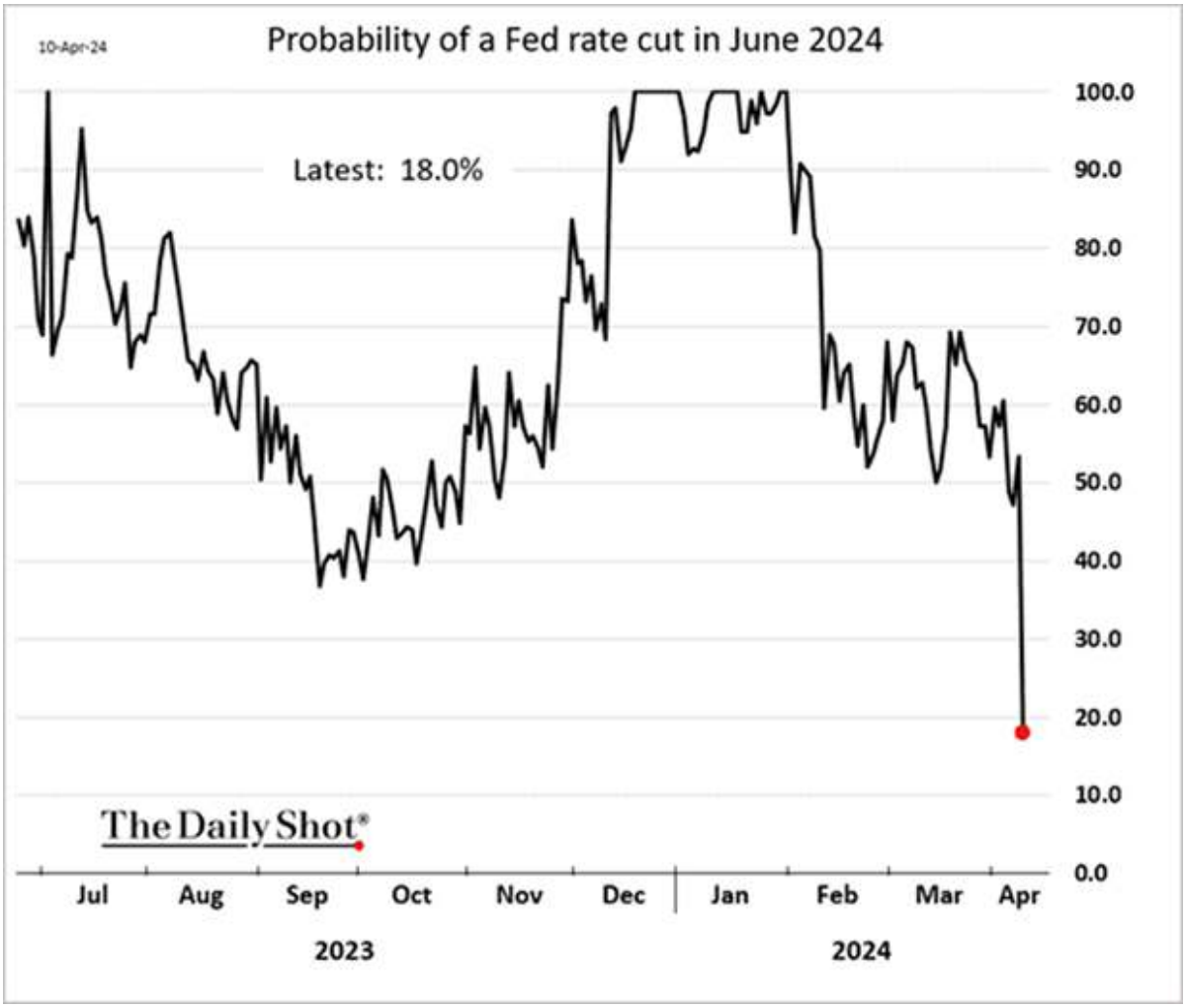
For bond investors the big story of the last few weeks has been those toppy US inflation figures - the markets have now convinced themselves that rate cuts by the US Federal Reserve are not imminent. In fact, according to the macro research service The Daily Shot, the market is now pricing only 41 bps of Fed rate cuts this year:

The Fed's FOMC dot plot chart gives us a graphical overview of the growing pessimism about rate cuts:



Source: @TheTerminal, Bloomberg Finance L.P.

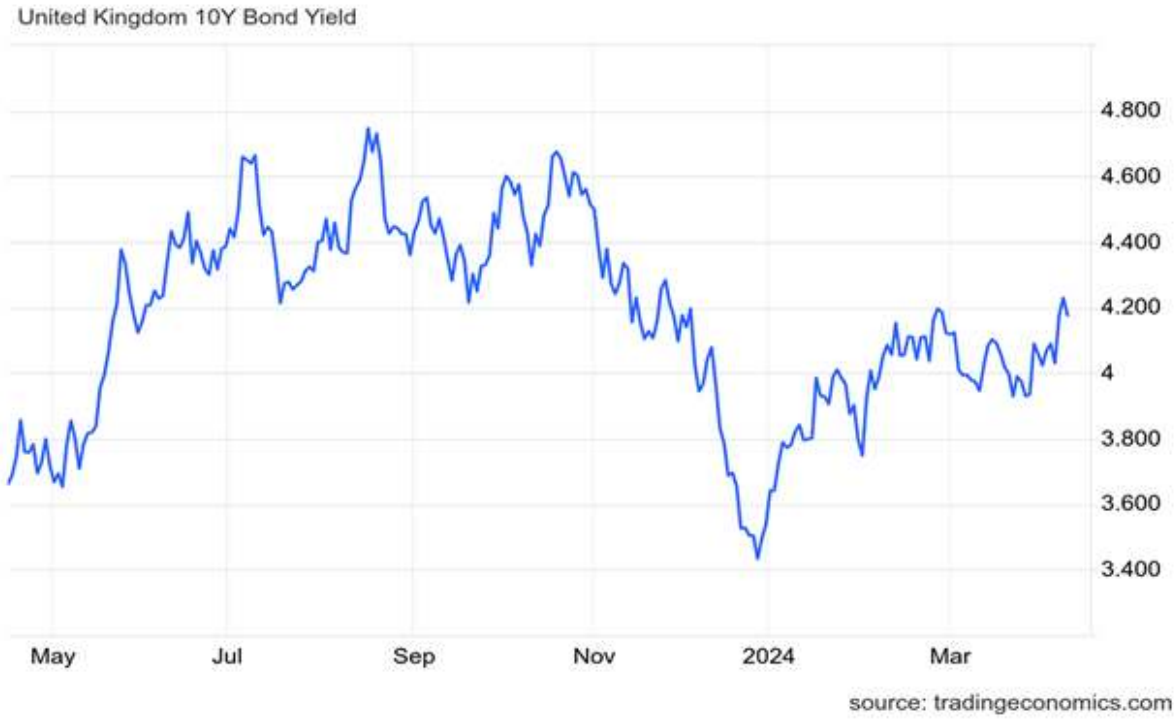
Its also worth noting that the probability of a Fed rate cut in June has collapsed. Will we see any rate reductions at all?



Given this backdrop, it won't come as a surprise to discover that since the end of January the yield on 2 year US Treasuries has risen from a recent low of just under 4% to their current level a smidgeon under 5%. The 10-year yield has also increased from a recent low of 3.74% to the current

4.53%. By contrast, the UK 2-year bond yield has tended to trade steadily within a range of between 4.1% and 4.6% - with the current level at 4.35%.

UK Government Bonds 10-year Rate 4.30%



Source: http://www.tradingeconomics.com/united-kingdom/government-bond-yield

CDS Rates for Sovereign Debt

Country	Five Year
France	24.49
Germany	10.07
Japan	18.87
United Kingdom	28.29
Ireland	22.45
Italy	65.34
Portugal	37.5
Spain	37.32

Eurozone peripheral bond yields

Country	April 2024	March 2024	Spread over 10 year
Spain 10 year	3.18%	3.20%	81
Italy 10 year	3.72%	3.62%	135
Greece 10 year	3.44%	3.33%	107

	S&P Rating		Moody's Rating		Fitch Rating
Germany	AAA	Stable	AAA	Negative	AAA
United Kingdom	AAA	Negative	AA1	Stable	AA+
United States	AA+	Stable	AAA	Stable	AAA

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Equity Markets and Dividend Futures

Although we've had a small pullback in equities over the last week or so, I think it's fair to say that overall sentiment is still fairly bullish, especially in the crucial US market - which tends to lead sentiment amongst global investors. Crucially if we look beneath the aggregate market data we see some interesting trends playing out - the key one is that the bullish narrative has moved away from a narrow group of mega-cap tech leviathans (and AI stocks), towards a cyclical upswing. For example, SocGen's Inflation Proxy Index which selects stocks sensitive to inflation, but which inevitably picks up economic sensitivity alongside it, is at a recent relative high versus the MSCI equal-weighted benchmark: it was up 8% in March and is tracking US 10-year bond yields higher.

Given this backdrop, it's not surprising to discover that the US market had a strong first quarter (for 2024). As Howard Silverblatt of S&P Dow Jones Indices reports, the US market's first quarter of this year saw the S&P 500 index up 10.16% (10.56%) and 2023 return up 24.23% (26.29%), making up for 2022's 19.44% decline.

The market continued its onward-and-upward trades in March (up 3.10%), breaking through the 5,100 and 5,200 level (5,254.35 high and 5,264.85 intraday high), as the five-month run (cumulatively 25.29%) has added USD 8.9 trillion into shareholders' pockets. Some highlights from the S&P Dow Jones report included the following:

- **Lower intra index volatility.** Monthly intraday volatility (daily high/low) decreased to 0.73% from 0.74% in February, as the YTD was 0.75%; 2023 was 1.04%, 2022 was 1.83%, 2021 was 0.97% and 2020 was 1.51% (the long-term average is 1.42%).
- **Lower overall index volatility.** In March, 3 of the 20 trading days moved at least 1% (2 up and 1 down), as none increased at least 2%, with February recording 4 (3 up and 1 down) of the 20 trading days; YTD 10 have moved at least 1% (7 up and 3 down), as one (up) has moved at least 2%. For 2023, 63 of the 250 days moved at least 1% (37 up and 26 down) and 2 moved at least 2% (1 up and 1 down).
- **Decent sector breadth (more sectors increased).** All 11 sectors in the S&P 500 increased for March, level with all 11 in February. Energy did the best, up 10.43% for the month (up 12.69% YTD and up 70.61% from the 2021 close), while Consumer Discretionary did the worst, up 0.01% (up 6.81% YTD and up 1.20% from the close of 2021).
- **Earnings growth is expected to slow down.** Analysts at Deutsche Bank reckon that over the last 3 months, the bottom-up company analyst consensus for S&P 500 Q1 EPS has fallen in line with the historical norm. The consensus once again sees weak growth, expecting growth to halve from 9.2% to 4.2% yoy. With solid above-trend macro growth continuing in Q1, they see headline earnings growth remaining flat at around 10% but look for a rotation within.

Index	March 2024	April 2024	Reference Index Value	Level 6 Months Ago
Stoxx 50 Dec 23 contract	161.3	160.6	499.7	143
FTSE 100 Dividend Dec 2023	303	300	8022	299

Note changed to Dec 2024 contracts

Name	Price % change						Close
	1 mth	3 mths	6 mths	1 yr	5 yr	6 yr	
FTSE 100	3.41	5.08	4.8	2.39	7.73	10.4	8011.94
S&P 500	0.46	8.68	19.5	27.1	78.8	95.2	5199.06
Gold Composite (Most Traded)	9.54	15.7	26	17.2	83.4	77	237270¢
iShares FTSE UK All Stocks Gilt	-1.33	-1.19	2.97	-3.99	-22.7	-21.7	1025.88p
VIX New Methodology	7.73	17.4	-10.7	-2.19	24.1	-19.4	14.91

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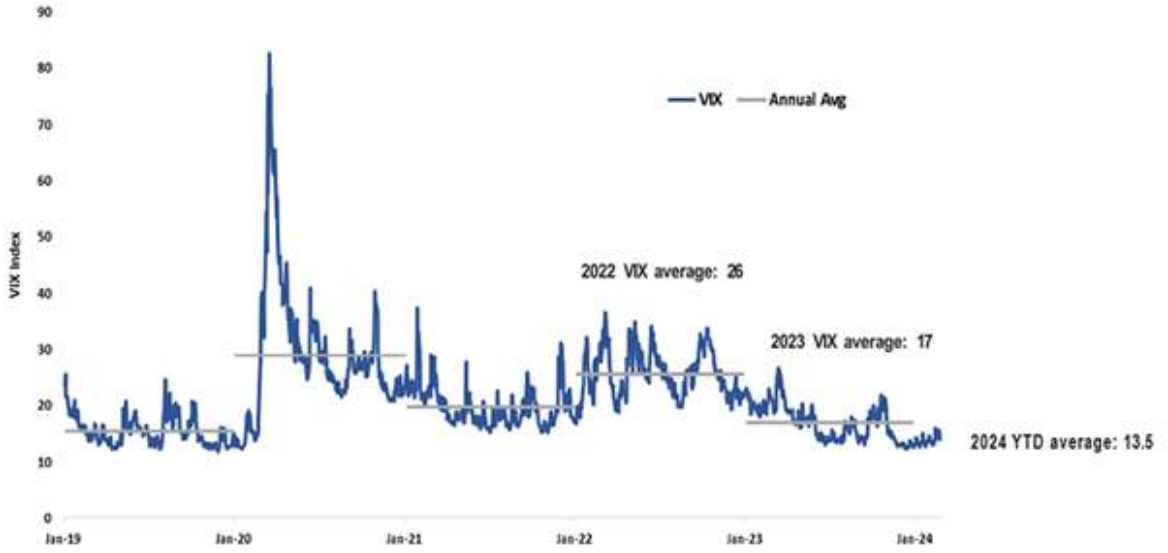
Volatility

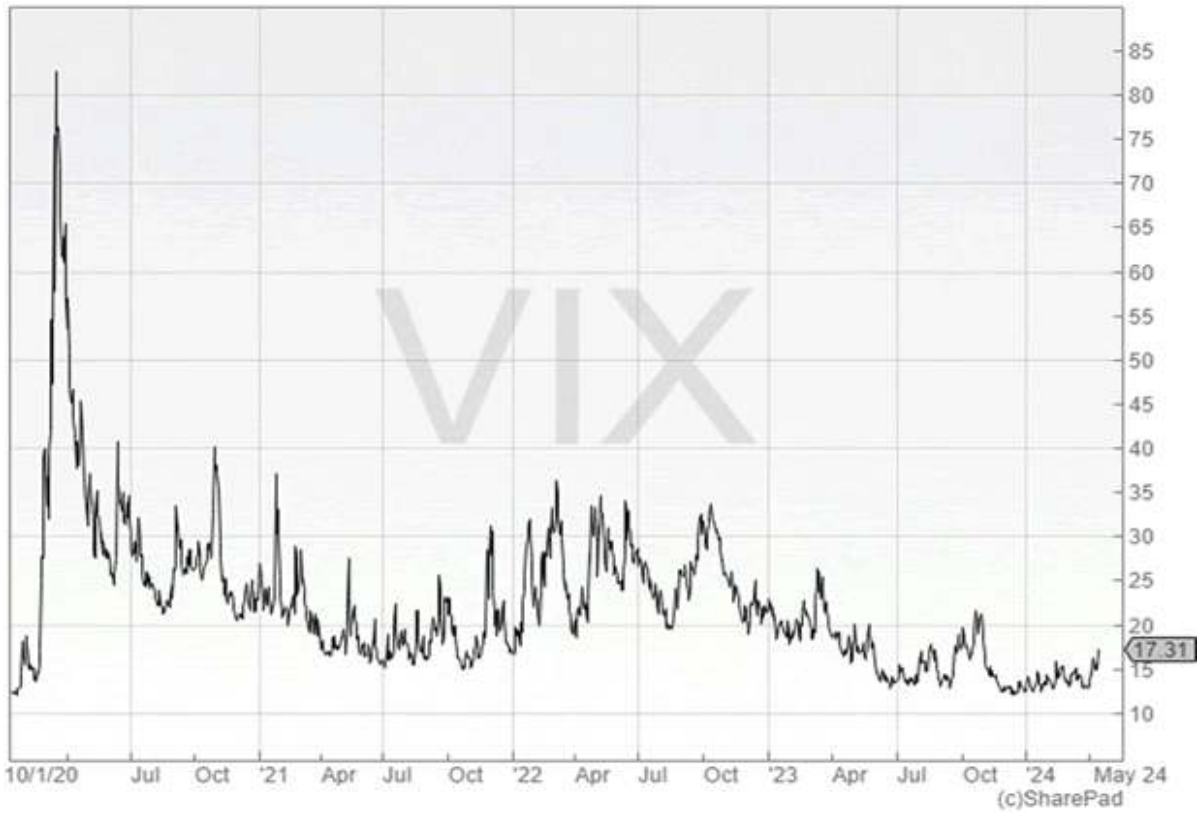
At the beginning of this report, I mentioned the growing popularity of ETFs that incorporate some form of options position. As the number of these options-based ETFs has shot up, economists have noticed a strange irony - investments in options that in some way price of volatility have increased just as market volatility as measured by the Vix has fallen off a cliff. As I have frequently pointed out, the VIx has for most of 2023 and 2024 (so far) been trending lower into a range between 12 and 18 - the long-term average is closer to 20. Putting two and two together two BIS (the Swiss based regulator) economists Karamfil Todorov and Grigory Vilkov have suggested that the rise of options-based ETFs might be responsible for the lack of market turbulence:

"An alternative and presumably more likely reason behind the compression of volatility is the surge in issuance of yield-enhancing structured products. These types of structured products provide a yield enhancement by offering higher returns to investors thanks to the sale of options. ... The rise of yield-enhancing structured products may dampen volatility due to the mechanics of how dealers hedge option exposures. When dealers sell such structured products, they effectively buy an option from their clients. To hedge the option exposure, dealers trade in the underlying asset (the equity index) as a function of its price. Specifically, they need to buy when the index goes down and sell when it goes up - a practice known as "dynamic hedging". By doing so, dealers act in a contrarian way, effectively dampening the price movements of the underlying asset. As volatility declines, so does the cost of ensuring against it, as reflected in option prices."

A good response to this comes from a paper by Mandy Xu at the CBOE which acknowledges that the Vix has been trading in a subdued fashion - by mid March the "VIX Index Has Fallen From An Average of 26 in 2022 to Just 13.5 YTD" - but points to a more obvious driver, macro economic sentiment:



"...low vol isn't a unique feature of the equity market, but a phenomenon we're observing across every asset class (with the notable exception of rates). Implied volatilities have fallen broadly and significantly over the past year across equities, credit, FX, and commodities. A year ago, every asset class volatility was trading rich (1-5 standard deviations above their 10-year average). Fast forward to now, every asset class volatility is trading below their 10-year average (apart from rates), with equities squarely in the middle of the pack (both credit and FX implied volatilities screen cheaper than equity vol). This suggests that whatever is driving VIX index lower is very much macro fundamental in nature rather than equity-specific - hence the cross-asset nature of the volatility decline. More specifically, it's the positive turn in the economic outlook as investors went from fearing a recession to now expecting a soft landing."



Measure	April Level	March Level	February Level	January Level
Vstoxx Volatility	16.53	13.03	13.62	13.92

VFTSE Volatility	17.31	14.40	12.93	12.69

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Summary of Pricing Impact on Structured Products

Pricing Parameter	Change	Impact on Structured Product Price
Interest Rates	Up	Down
Underlying Level	Up	Up (unless product offers inverse exposure to the underlying)
Underlying Volatility	Up	Down for capped return/fixed return/capital at risk products. Up for uncapped return/capital protected products.
Investment Term	Up	Down
Issuer Funding Spread	Up	Down
Dividend Yield of Underlying	Up	Down
Correlation (if multiple underlyings)	Up	Up (unless product offers exposure to the best performing underlyings only)

Source: UK Structured Products Association, January 2014

This information is provided for information purposes only, and the impact on a structured product price assumes all other pricing parameters remain constant.

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Explanation of Terms

CDS Spreads and Credit Ratings

A CDS effectively acts like an option insuring at a cost in basis points a bank or government bond in case of default. The higher the basis points, the riskier the market perceives that security. Crucially CDS options are dynamic and change in price all the time. A credit rating is issued by a credit rating firm and tells us how risky the issuer is viewed based on the concept that AAA (triple A) is the least risky and ratings at C and below are regarded as much riskier. CDS and ratings are useful for structured product buyers because they give us an indication of how financial risk is viewed by the market. Crucially a high CDS rate indicates that an issuer of a bond will probably have to pay a higher yield or coupon, which could be good for structured product buyers as bonds are usually a prime source of funding for a structured product. G8 government bonds issued by the likes of the UK and US Treasury are also sometimes used as collateral in some form of investments largely because they are viewed as being low risk. One last small note on credit ratings and CDS rates. A is clearly a good rating for a bond (and much better than B) but AA will be viewed as even safer with triple AAA the least risky. Terms of CDS rates anything much above 100 basis points (1%) would warrant some attention (implying the market has some, small, concern about the possibility of default) while anything above 250 would indicate that the market has major concerns on that day about default.

Why does the yield matter on a bond?

As we have already explained bonds are usually used as part of a structured product. The bonds yield or coupon helps fund the payout. All things being equal a higher bond yield means more funding for the payout. But rising bond yields, especially for benchmark US and UK Treasury 10 year bonds also indicate that the markets expect interest rates to rise in the future. Rising interest rates are not usually a good sign for risky financial assets such as equities.

Volatility measures

Share prices move up and down, as do the indices (the 500 and FTSE100) that track them. This movement up and down in price is both regular and measurable and is called volatility. It is measured by stand alone indices such as the Vix (tracking the volatility of the 500), VStoxx (the Eurozone Dow Jones Eurostoxx 50 index) and VFtse (our own FTSE index). These indices in turn allow the wider market to price options such as puts and calls that pay out as markets become more volatile. In simple terms more volatility implies higher premiums for issuers of options. That can be useful to structured product issuers as these options are usually built into an investment, especially around the barrier level which is usually only ever broken after a spike in volatility. Again all things being equal an increase in volatility (implying something like the Vix moving above 20 in index terms) usually implies higher funding levels for issuers of structured products.

Dividend Futures

These options based contracts measure the likely total dividend payout from a major index such as the FTSE 100 or the Eurozone DJ Eurostoxx 50 index. In simple terms the contract looks at a specific year (say 2015) then examines the total dividend payout from all the companies in the index, adds up the likely payout, and then fixes it as a futures price usually in basis points. Structured product issuers make extensive use of dividend futures largely because they've based payouts on a benchmark index. That means the bank that is hedging the payout will want to be 'long' the index (in order to balance it's own book of risks) but will not want the dividends that come from investing in that benchmark index. They'll look to sell those future possible dividends via these options and then use the premium income generated to help fund their hedging position. In general terms the longer dated a dividend future (say more than a few years out) the lower the likely payout on the dividend future as the market cannot know dividends will keep on increasing in an uncertain future and must his price in some level of uncertainty.

Equity benchmarks

Most structured products use a mainstream well known index such as the FTSE 100 or 500 as a reference for the payout. For investors the key returns periods are 1 year (for most auto calls) and 5 and six years for most 'growth' products. During most though not all five and six year periods it is reasonable to expect an index to increase in value although there have been many periods where this hasn't been the case especially as we lurch into a recession. Risk measures such as the sharpe ratio effectively measure how much risk was taken for a return over a certain period (in our case the last five years using annualised returns). The higher the number the better the risk adjusted return with any value over 1 seen as very good.

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To find out more about UKSPA, please visit **www.ukspassociation.co.uk**.

Kind Regards,

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