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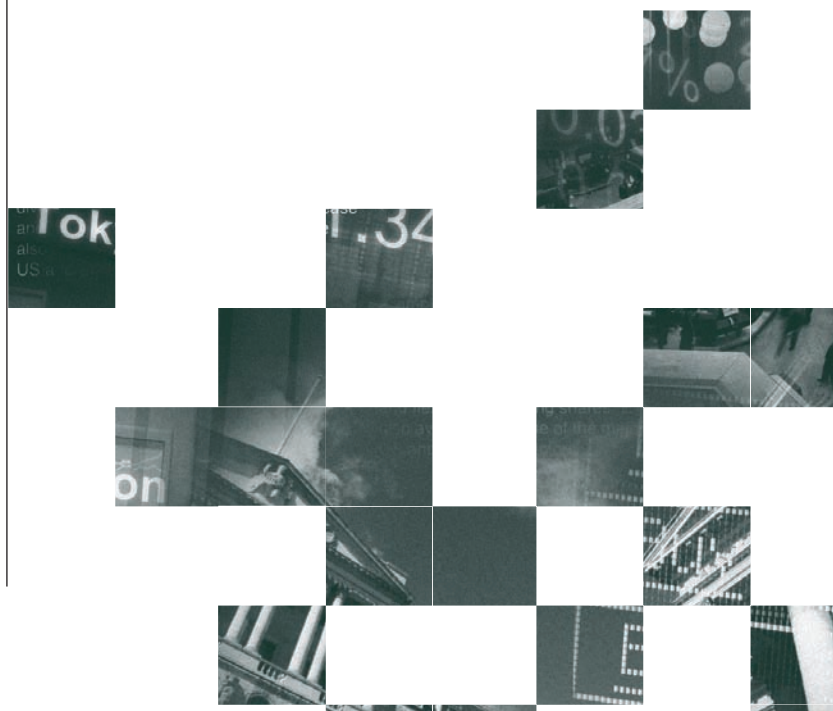
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Printed in the United Kingdom by: St Ives, Roche, UK

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# The potential of the European ETF market

Europe's exchange traded fund market is set for rapid growth in the next few years, with demand for the product from both institutional and retail investors intensifying, stimulated by regulatory changes and new thinking about risk and return

When Deutsche Bank launched its range of db x-trackers ETFs in January 2007, many asked why it wanted to enter the exchange traded funds (ETF) market seven years after the first products were launched in Europe. The answer was easy - the Europe's ETF market still has a long way to go to fulfil its potential.

Although there are over 360 products available and assets of more than \$110 billion, the ETF market in Europe is less than a quarter of the size of the market in the US, where ETFs have been available since 1993.

Many analysts predict that the ETF market in Europe will grow three-fold over the next few years. This article attempts to outline the factors driving this growth and the reasons why Deutsche Bank has entered the market.

## Institutional demand

ETF assets account for less than 1% of total assets under management in Europe. This is very much the tip of the iceberg. Demand for ETFs will continue to grow from institutional investors such as pension funds, insurance companies and funds of funds.

Regulatory changes such as UCITS 3 now allow institutional investors greater flexibility to use ETFs. Under the old regime, the total allocation to ETFs was limited to 5% of the portfolio; now it is possible to have up to 100% allocated to ETFs. In addition, ETFs provide institutional investors with a means to gain access to new markets (eg, emerging markets) or asset classes (eg, commodities or credit) that may be difficult for them to access easily.

Although UCITS 3 has made it possible for traditional long-only funds to use derivatives as part of their investment policy, many still lack the back office infrastructure and knowledge to take advantage. ETFs are regulated funds that trade on recognized stock exchanges that can be bought or sold without the need for any of the documentation or the need to maintain margin or collateral accounts associated with the use of derivatives. In addition, ETFs are a viable alternative for investors who cannot use derivatives in their portfolios for regulatory or internal reasons.

With increasing emphasis on pension provision in both the developed and developing economies, the demand for passive products such as ETFs will increase. ETFs provide the ideal long-term, low-cost investment for pension funds.

## Retail demand

The retail market for ETFs in Europe is still undeveloped and presents another area of growth. In the US the retail market accounted for around

50% of new inflows into ETFs in 2006. In Europe, the figure is estimated to be around 20%.

Traditionally, investment products such as funds and structured products have been sold in Europe on a commission basis by independent financial advisers (IFAs); the IFAs are compensated by the product provider. As ETFs have a low fee structure it is not feasible to pay commissions. Hence to date ETFs have not been embraced by the IFA community. However, with more regulatory scrutiny and accountability being placed on advisers, ETFs can benefit. Increasingly there is a trend to fee-based advisory, whereby advisers charge a fee to their client rather receiving commissions. This is advantageous for the growth of ETFs. The low cost structure makes them an ideal product to include as part of an investment portfolio.

Once again taking the lead from the US, the inclusion of ETFs in savings or investment plans is another area that will contribute to their growth. There are some funds of ETFs or savings products available in Europe but not on the same scale as in the US. Furthermore, ETFs should be eligible for inclusion in investment products such as individual savings accounts (ISAs) and self invested personal pensions (SIPPs) in the UK and plans d'épargne en actions (PEA) in France, where they can be used as part of the core investment.

With ETFs listed on 18 stock exchanges in Europe and 41 globally, and more product providers announcing that they will enter the ETF market, there is the momentum for new asset inflows and for the market to grow further.

## Winds of change

The asset management industry has probably seen more change in the past few years than in the previous two decades. The investment emphasis has shifted from return versus risk to benefit versus cost. It is now generally accepted that passive instruments such as ETFs have a role to play in portfolios, allowing managers to reduce costs and enhance returns.

However, rather than ETFs being used as a part of the 'core' in a core/satellite asset allocation strategy, they can also be used as part of a 'portable beta' strategy. As traditional active fund management becomes more commoditized, the search for 'alpha' is becoming more difficult and pure uncorrelated alpha is becoming scarce.

Instead, the beta component of a portfolio can be actively managed to generate alpha. ETFs provide the perfect toolkit of beta products to do this. As will be explained, the variety of ETFs now available enables fund managers to use their asset allocation skills to generate alpha in their portfolios.



# The rise and rise of ETFs

ETFs' 15-year success story is due in part to their convenience and cost-effectiveness, qualities that European investors are increasingly coming to appreciate. By Dan Draper, head of Lyxor ETFs, UK, Ireland and Nordic

Exchange traded funds (ETFs) have one of the most striking market growth stories in investment management in recent history. Since the launch of the first ETF 15 years ago, the number has grown to almost 1,000 worldwide, with nearly \$700 billion in assets under management.

The ETF story continues to move rapidly along. Ever more products are being launched, covering new sectors of the market. Yet despite their increasing prevalence, many investors in Europe still have much to learn about the benefits and sheer versatility of ETFs. By using ETFs, investors can harness a whole new range of investment strategies efficiently and cost-effectively.

ETFs track indexes but, unlike "tracker" mutual funds, ETFs are shares that can be bought and sold on the stock market like any other shares. They are cost-effective, transparent and highly liquid assets. They provide access to a whole market through the purchase of just one share. A big advantage over mutual funds is that they are traded continuously, rather than having just one daily price fixing.

In Europe, the UCITS III legislation implemented in February 2004 has increased demand for ETFs from other asset managers. The legislation raised the share of their portfolios that fund managers could invest in another single UCITS fund from 5% to 20%.

The prospects for the UK as a centre for ETF trading were boosted late last year when the government announced it would revoke the stamp duty on foreign-domiciled ETFs. This gave a level playing field to foreign ETF providers such as Lyxor to enter the UK market. Together with a more principle-led regulatory environment, the path is now laid for London to become one of the world's leading centres for the trading of ETFs. Lyxor's decision to launch was of course also prompted by the substantial demand for these products in the UK.

Lyxor launched into the UK market in May with the Lyxor ETF FTSE All-Share, the Lyxor ETF FTSE 100 and the Lyxor ETF FTSE 250. The All-Share product was the first ETF giving access to the All-Share index – previously, investors had to resort to buying several ETFs tracking the FTSE

“ETFs simplify the asset allocation process by giving low-cost access to particular indexes. This makes them the perfect ‘beta’ investment for investors who implement a core-satellite investment approach”

Morgan Stanley's latest ETFs Report gives a very comprehensive assessment of the ETF market. At the end of first-half 2007, there were 953 ETFs, with 1,494 listings, assets of \$688.8 billion managed by 66 managers on 41 exchanges. The number of ETFs increased by 239 over the period, with plans to launch a further 524: 83 in Europe, 390 in the US and 51 elsewhere. Assets under management in ETFs increased by 18% during the first half of 2007, which was greater than the 8% rise in the MSCI World Benchmark in US dollar terms.

## Europe starts to catch up

The US is still the largest market for ETFs, with 499 ETFs and \$469.5 billion AUM, according to Morgan Stanley. By comparison, Europe has 336 ETFs and \$107.7 billion AUM and Japan 13 ETFs and \$49.8 billion. But the gap is rapidly being closed by Europe, where ETFs were first launched just seven years ago. They now constitute one of the fastest growing segments in the continent's asset management industry. The European ETF market grew by 20.1% over the first half of 2007, compared with 15.4% growth in the US.

100 and FTSE 250, which together tracked a smaller percentage of the UK market than the All-Share. In June, Lyxor launched two more ETFs, the Lyxor ETF Commodities CRB, linked to the Reuters/Jefferies CRB Index, the oldest and most widely followed index of commodities futures in the world, and the Lyxor ETF Commodities CRB Non-Energy.

Both in the UK and globally, the choice of ETFs is extensive and growing fast. They already give access to the world's major indexes such as the FTSE 100, S&P 500 or the TOPIX, as well as less well known benchmarks that track emerging markets and specific industry sectors, such as financials or telecoms. ETFs that track commodities such as gold and commodity indexes like the Reuters/Jefferies CRB Commodity Index are also becoming very popular.

## Attractive advantages

So what are the advantages of ETFs that have made them so attractive to investors? There are four main advantages:

**Convenience** – ETFs are a convenient and cost-efficient alternative to purchasing all of the underlying securities of a particular index. Structured as a single security, traded on an exchange just like a stock, ETFs empower investors to access entire indexes and forego the hassle of index rebalancing or other corporate events, as well as the potential trading constraints linked to illiquid index component stocks.

**Cost efficiency** – ETFs are a cost-effective way to achieve broad index exposure. Morgan Stanley says the average total expense ratio for equity ETFs in Europe now stands at 46 basis points a year – some way below the average TER of 100bps for equity index funds and 191bps for active equity funds in Europe. The three ETFs that Lyxor launched into the UK market in May had total expense ratios of just 30-40bps/year, with no other costs deducted.

**Low tracking error** – Tracking error measures the constancy of the relative performance spread between an ETF and its benchmark. It is measured as the standard deviation of the difference between the ETF and index weekly performances over 52 weeks. The better the replication, the lower the tracking error. Lyxor ETFs track their benchmark indexes very closely – typically, tracking error is close to zero and correlation with the index is over 99.99%.

**Transparency and liquidity** – Lyxor makes available the basket of stocks upon which the performances of each Lyxor ETF is based every day. Designated market-makers also offer real-time, two-way prices on Lyxor ETFs with tight spreads. Investors can get in and out of the market any time of the day at a price very close to net asset value, unlike mutual funds, which can only offer one price a day.

### Perfect beta investment

What do these advantages mean for investors? Much of the interest shown in ETFs has come from the realization that the vast majority of returns in any given investment portfolio have resulted from asset allocation decisions rather than the market timing expertise of individual fund managers. In fact, long-term academic evidence indicates that the majority of fund managers underperform their benchmark indexes in the particular markets in which they operate. This is especially true during periods of high market volatility. ETFs simplify the asset allocation process by giving low-cost access to particular indexes. This makes them the perfect 'beta' investment for investors who implement a core-satellite investment approach. ETFs can also be used to give effective exposure to particular industrial sectors or countries, with the ability to rotate this exposure as and when required.

ETFs' liquidity makes them ideal to use in transition management operations, with institutions often using them to equitize cash holdings in the short term while they decide which active fund managers to employ. They are a good substitute for futures in the management of cash flows, especially for institutions that might have restrictions on their use of futures or in relation to benchmarks for which no futures contracts are available.

Dan Draper,  
head of Lyxor ETFs,  
UK, Ireland &  
Nordic



An area that has generated growing interest in ETFs is the ability to short them. Investors can use them to hedge particular sectors, regions or countries. Given institutions have a long-term approach to risk, they can also reduce the cost of using ETFs by lending them to short-term speculators such as hedge funds that wish to short an index.

### Useful investment tools

Investors should certainly take the time to learn about these surprisingly simple and transparent products that are extremely useful investment tools. They need to be careful in that, unsurprisingly for such a successful product, there have been spin-offs such as exchange traded notes and exchange traded commodities, which are fundamentally different investment structures. Institutions also need to look at the breadth of product range as well as the charges and the tracking errors between different funds, which can be surprisingly divergent.

There is no doubt that the ETF market is a long way from saturation point and is set for continued expansion for many years yet. Morgan Stanley predicts total global assets under management in ETFs will reach \$2 trillion by 2011. The European ETF market will certainly play an increasingly important role in that growth. To use a cricket analogy, Europe is still in the first over of the first innings of the first day of a test match. And European ETFs appear to be headed for a high score.

For further information, please contact

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# New tools for old markets

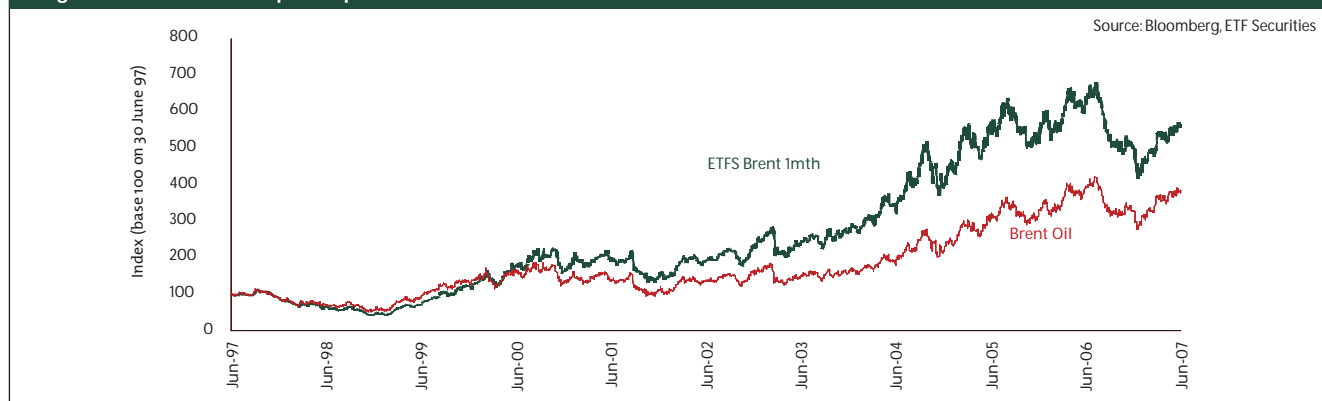
The development of exchange traded commodities in recent years has opened up some of the oldest markets in the world to ordinary investors, bringing new diversity to their portfolios

Commodities are among the oldest markets in the world. Commodities have existed for thousands of years and today's commodity exchanges have been around for hundreds of years. The Chicago Board of Trade (CBOT) was founded in 1848 and traded its first corn contract in 1951. Even though these are old markets, however, access to commodities for ordinary investors is a new phenomenon. Commodity futures have also existed for many decades – agriculture futures are some of the oldest, whereas New York Mercantile Exchange's West Texas Intermediate oil futures started trading in 1983. Yet commodity futures markets have been the domain of sophisticated investors. As a result, investors have been excluded from exposures which may benefit a portfolio's performance.

and may disintegrate, and are difficult to transport and thus illiquid. As a result, all barrels of oil or bags of coffee are not fungible (ie, they are not all the same).

Futures pricing solves these problems. Futures are standardized contracts, meaning that they are fungible. As a result, prices are liquid and get around the problems inherent in physical commodities. Since commodity futures are not exactly the same as physical barrels of oil, this leads to differences in investment returns. Figure 1 shows that over the past 10 years, ETFS Brent one-month would have outperformed the Brent spot oil price; however, both went through periods of relative over- and under-performance.

Figure 1: Oil ETC versus spot oil price



Around 2000, commodities markets went through some fundamental changes, including increased investor appetite for alternative assets classes, record low inventories coupled with tight supply and increasing demand for raw materials from emerging markets such as China and India. These factors led to the development of a wide range of structured products on commodities. Continued demand by investors for access to simple and direct commodity exposure has more recently led to the development of exchange traded commodities (ETCs), with Europe being the world leader. In the past two years, 42 ETCs have been listed in London with eight of these providing exposure to oil.

## Priced off futures

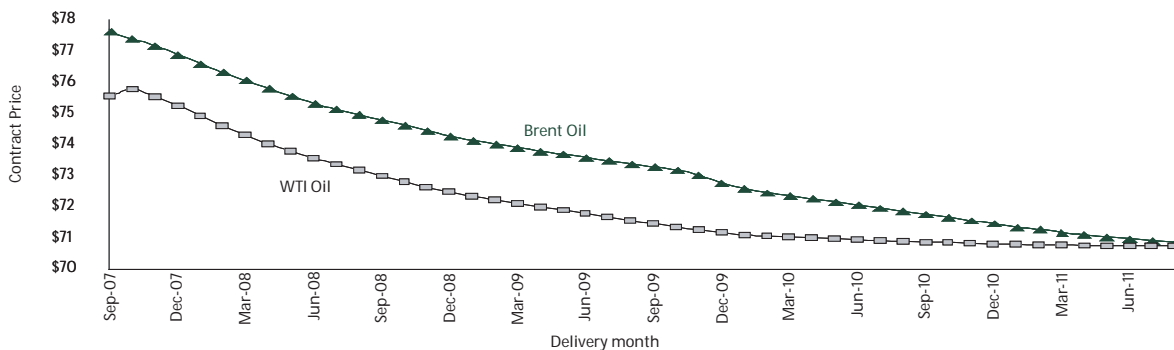
One significant difference with commodities investment is that nearly all "direct" commodities investment is priced off commodity futures. This means that while commodities investing will track commodity prices, there can be slight nuances resulting in varying returns. The most common question is "why not just price off physical spot prices?" This is difficult because most physical commodities are heterogeneous (differing in quality, weight, type, value, origin, value), often hard to store

Figure 2 shows that an investment in oil futures can perform differently to the spot oil price (which is uninvestable). Oil futures returns are driven by three sources: oil prices, roll yield, and interest on collateral. The roll yield is a result of the fact that oil futures expire. To prevent expiry of the future (and delivery of 1,000 barrels of oil), it is necessary to "roll" the investment. This involves selling the current futures contract and reinvesting the funds in a later-dated contract, thereby avoiding expiry and keeping the investor full invested. This process of rolling can lead to either a positive effect (backwardation) or a negative effect (contango). Thus an investment in oil futures (or oil ETCs) may out-perform or under-perform the spot oil price at different times.

## Oil futures and the forward curve

An oil futures contract is a standardized contract with a specific maturity, meaning that when the contract expires, the investor in that contract will either receive 1,000 barrels of oil on a specific date in a specific location (eg, Cushing, Oklahoma, in the case of WTI oil futures) or the cash value (in the case of ICE Brent oil futures). Oil futures contracts have the widest range of delivery dates, going out more than

**Figure 2: Oil and the forward curve**



Source: Bloomberg

five years. The best way to think of the oil futures curve is to compare it to the term structure of interest rates. As the maturity increases, the interest rate will vary. Similarly for oil futures, as the maturity increases, the price of the contract will vary. There are many theories which try to explain the shape or structure of the oil futures curve. I don't intend to debate the theories here, other than to say that no one theory is able to explain the shape of the curve at all times.

### Development of ETCs and oil ETCs

ETCs were developed a few years ago in response to investor demand. Initially the demand was for simple access to commodities. As a result, ETCs on over 23 individual commodities and 11 indices were listed on European exchanges. Since then, investor knowledge of commodities and commodity investing has come a long way. At the same time, the liquidity of oil futures with longer maturities has grown by 500% to 1,000% over the past three to five years. Since ETCs are directly or indirectly priced off commodity futures, this provides the ability to offer ETCs with exposure to different sections of the futures curve. As of August 2007, the London Stock Exchange (LSE) offers a platform of eight oil ETCs providing exposure to two types of oil (WTI and Brent) with four different maturities of each.

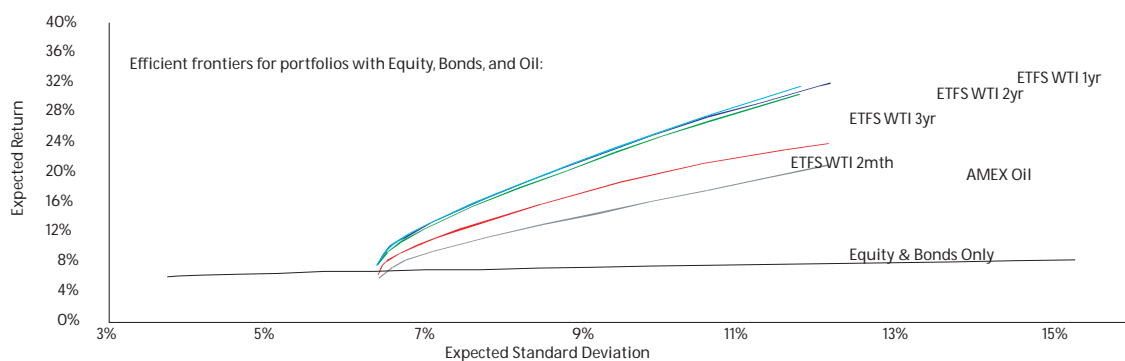
Investing in oil ETCs or oil futures of different maturities will lead to different investment returns and properties. The differences in return are caused by sensitivity to spot prices and the roll yield; however, they

also have some things in common, including low correlation to equities and bonds – which leads to the construction of more optimal portfolios - and high correlation to movements in the oil price. Figure 3 shows the optimal portfolio for equities and bonds (shown by the black line) and also a portfolio which includes an investment in different oil ETCs (shown by the coloured lines). The higher curves show that an investment in oil could have improved a portfolio's performance over the past five to 10 years.

All oil ETCs are correlated to the spot oil price, but the correlation is highest for shorter-dated ETCs. This is because events that affect the current oil price will have less impact on the price in, say, three years' time. A hurricane or a problem at an oil refinery, for example, tends to be a short-term issue and will therefore affect today's oil price but not the price three years from now. Factors that tend to affect longer-dated oil prices are fundamental industry changes such as tightening supplies, increased demand from emerging economies, increased riskiness of oil production or falling reserves and discovery rates.

As discussed earlier, oil futures and ETCs are exposed to backwardation and contango. Historically, backwardation or contango have tended to persist for two to three years at a time. Therefore depending on the current state of the market, it could be advantageous to invest in shorter- or longer-dated oil. Based on historical simulations, an investment in shorter-dated oil (eg, two months) out-performed an invest-

**Figure 3: Portfolio Sets**



ment in longer-dated oil (eg, three years) when the oil market was in backwardation, while longer-dated oil out-performed an investment in shorter-dated oil when the market was in contango.

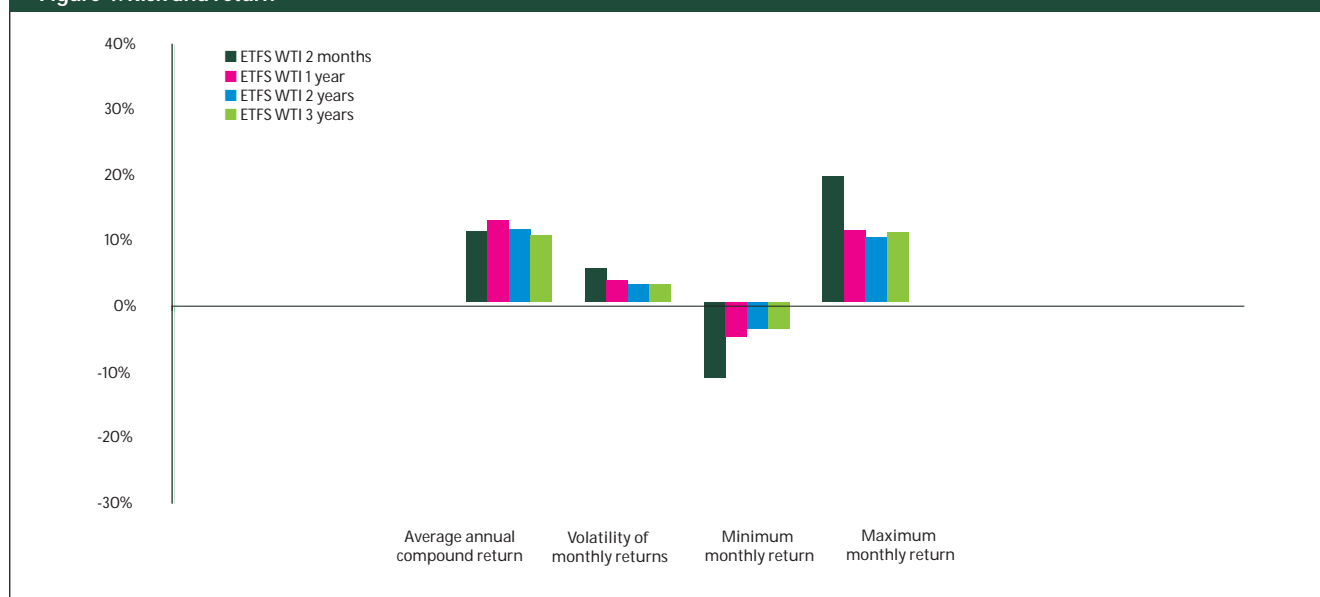
The ability to invest in different parts of the oil futures curve also allows investors to develop trading strategies. Over the past 10 years, if an investor bought ETFS WTI two-month when the market was in backwardation (based on a rolling three-month roll yield) and then sold this and invested the proceeds in ETFS WTI three-year when the market was in contango, it could have out-performed a simple buy-and-hold strategy by approximately 8.5% a year.

## Risk and returns

An investment in shorter-dated oil is more sensitive to the oil price and the state of the oil market. Figure 4 shows that an investment in shorter-dated oil was approximately twice as volatile as longer-dated oil over the past 10 years. This is also supported by the fact that the maximum loss for shorter-dated oil was much greater than longer-dated oil. While investment in different maturities shows short-term differences in the performance of oil ETCs, the average annual return was similar for all maturities over the past 10 years.



Figure 4: Risk and return



## Conclusion

Investing in commodities provides investors with additional sources of diversification which can improve portfolio performance. The development of ETCs has opened up some of the oldest markets in the world to ordinary investors. ETCs are designed to be simple so that any investor can buy and hold an ETC in normal brokerage accounts, and unlike futures, require no daily management. ETCs are priced off underlying futures markets and, as a result, may provide exposure to different parts of the futures curve. Now investors can choose which commodity to invest in and, in the case of the new oil ETCs on the LSE, can choose exposure to either more or less volatility in spot prices and roll yields. In the future, more ETCs will be made available as markets develop and as investors' knowledge of commodities increases.

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Fund name	Management fee p.a.	Bloomberg
DAX® ETF	0.15%	XDAX GY
SHORTDAX® ETF	0.40%	XSDX GY
DJ EURO STOXX 50® ETF	0.15%	XESX GY
DJ EURO STOXX SELECT DIVIDEND® 30 ETF	0.30%	XD3E GY
MSCI EMERGING MARKETS TRN INDEX ETF	0.70%	XMEM GY
S&P CNX NIFTY ETF	0.85%	XNIF GY
EONIA TR INDEX ETF	0.15%	XEON GY
ITRAXX® CROSSOVER 5-YEAR TR INDEX ETF	0.24%	XTXC GY

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