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## Topic 1: I want exposure to commodities

### Introduction

Australians are used to investing in companies that deal in commodities. The resources sector of the sharemarket, for example, provides the opportunity to invest in Australian and international resource companies.

But what if you want 'pure' exposure to a physical commodity itself? How can you achieve this?

Investing directly in a commodity, for example by buying barrels of oil or tonnes of wheat, is not usually a realistic option.

A more practical method to gain exposure to commodities is to use financial instruments such as futures contracts or commodity ETFs.

### Understand both the commodity and the financial instrument

When investing in a financial instrument that gives you exposure to a commodity, you need to have a good understanding of two things:

- the market for the underlying commodity itself, and
- how the financial instrument gives you exposure to the commodity.

For example, if you invest in an ETF over crude oil, you need to understand the key drivers of the oil market. What are the global themes and other factors that drive the price of oil?



You also need to understand how the ETF gives you exposure to physical oil.


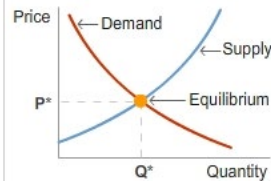

### Do I understand the financial instrument?

You may be able to get exposure to a commodity via several financial instruments, each with its own unique structure, benefits and risks.

When comparing different instruments, ask yourself:

- How does this instrument create exposure to the underlying commodity?
- Is there currency risk?

Commodity	Financial instrument
 <p>Direct investment involves:</p> <ul style="list-style-type: none"> <li>• transportation</li> <li>• delivery and handling</li> <li>• storage</li> <li>• insurance.</li> </ul>	 <p>Investment involves:</p> <ul style="list-style-type: none"> <li>• buying and selling in a centralised market such as ASX.</li> </ul>

Commodity	Financial instrument
 	 <ul style="list-style-type: none"> <li>• Features</li> <li>• Benefits</li> <li>• Risks</li> <li>• Terms and conditions</li> </ul>

- Is there counterparty risk?
- Do trading hours and liquidity vary between instruments?
- Does the product name tell me something important?

It is important to read the Product Disclosure Statement (PDS) carefully so that you understand the product before investing.



## Topic 2: How commodity ETFs work

ETFs offer a convenient way to get exposure to commodities without having to directly trade the commodity itself.

Commodity ETFs typically gain exposure to the underlying asset(s) either via physical backing, or using a synthetic structure.

Let's look at both these approaches.

### Physically-backed commodity ETFs

If a commodity ETF is physically backed, the ETF holds the underlying commodity itself.

For example, when the BetaShares Gold Bullion ETF issues new units in the ETF, it buys gold bullion, which is then held by a custodian in a vault.

A physically-backed commodity ETF aims to track the spot price of the commodity.

### Index tracking (Synthetic ETFs)

In most cases it is not practical or cost-effective for an ETF to physically hold and store the underlying commodity, so the ETF will generally track an index.

Commodity indices are based on futures contracts over the underlying commodity.

A synthetic commodity ETF aims to track a commodity index. For example, the BetaShares Crude Oil Index ETF - Currency Hedged (Synthetic) aims to track the performance of the S&P GSCI Crude Oil Index, which is based on a crude oil futures contract traded on the New York Mercantile Exchange (NYMEX).

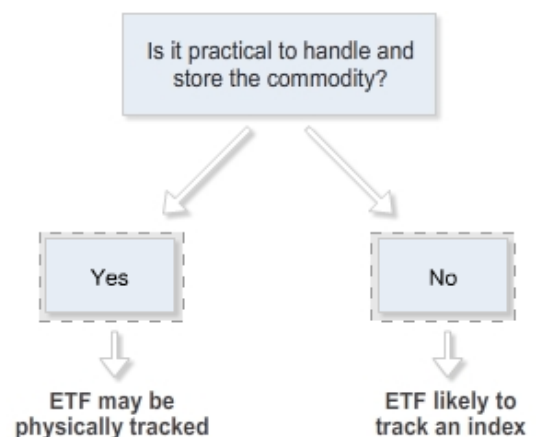
### Synthetic commodity ETFs

Index tracking commodity ETFs typically use a synthetic structure that involves:

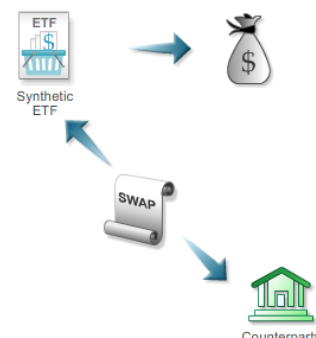
- investing the fund's assets in cash, and
- entering a swap agreement with a counterparty to receive the performance of the index being tracked.

Commodity ETFs either are physically backed (gold ETF is highlighted) or use a synthetic structure (agricultural, commodities basket and oil ETFs are highlighted).

Commodity Exposure			
BetaShares Agricultural ETF - Currency Hedged (Synthetic)	ETF	S&P/GSCI Agriculture Index	QAG
BetaShares Gold Bullion ETF - Currency Hedged	ETF	Gold	QAU
BetaShares Commodities Basket ETF - Currency Hedged (Synthetic)	ETF	S&P/GSCI Light Energy Index	QCB
BetaShares Crude Oil Index ETF - Currency Hedged (Synthetic)	ETF	S&P/GSCI Crude Oil Index	OOO



A synthetic commodity ETF typically invests in cash and also enters a swap with a counterparty.



ETFs using this structure must include the word '(synthetic)' in their name.

Under the swap agreement, the counterparty must make a payment to the ETF if the index outperforms the ETF's cash holdings.

Conversely, the ETF must make a payment to the counterparty if the index underperforms the ETF's cash holdings.

The net effect is that the returns from the cash holdings and the payment to or from the counterparty together replicate the performance of the index.

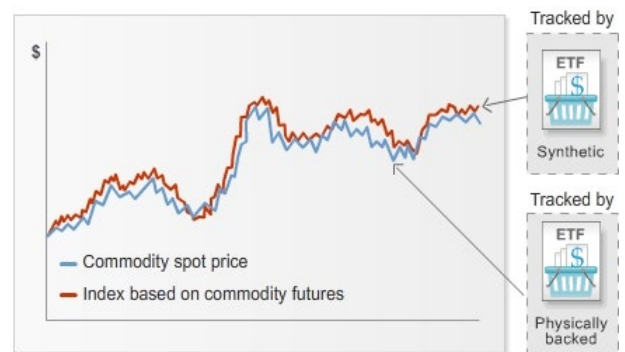


### Spot vs. futures price

The price of a commodity futures contract may not be the same as the commodity's spot price. Futures may be at a premium or discount to the spot price.

This means that an ETF that tracks an index based on a commodity futures contract may perform differently to the physical commodity itself.

Generally, however, the correlation between the price of a commodity and the price of a futures contract over that commodity will be very high.



### Structured products are not ETFs

Financial instruments similar to ETFs can sometimes be grouped alongside ETFs in product lists. While these products have some features in common with ETFs, other features, and the risks involved, may differ significantly. The rights and protections that apply to ETFs may not apply to these products.

If an instrument uses the term 'structured product' in its title it is not an ETF, and you have different risks to consider.

Structured products generally are based on a promise from the issuer to pay you a return based on a reference asset or index. This promise may be secured by assets provided by the issuer, or it may be unsecured. This means you are exposed to the risk that the issuer does not meet its obligations to provide the promised investment return.

Key feature	Product type
Swaps used to provide exposure	Synthetic ETF
Issuer holds underlying commodity	Physically backed ETF
Reliant on issuer performance for returns	Structured product

## Topic 3: Currency exposure

### Currency exposure

You buy and sell commodity ETFs on ASX in Australian dollars.

However most commodities are traded in US dollars.

The value of the commodity or the commodity index that the ETF tracks must therefore be converted from \$US into \$A. Consequently, commodity ETFs are exposed to movements in the \$A/\$US exchange rate.



### Hedged vs. unhedged

An ETF will either hedge its currency exposure, or leave it unhedged.

A currency-hedged ETF gives you pure exposure to the performance of the commodity. Currency hedging removes both the risk of an unfavourable currency movement, and the ability to benefit from a favourable movement.

An unhedged ETF means you are exposed to the performance both of the commodity and of the \$A against the \$US.

A currency hedged ETF may charge higher management fees.

The product PDS, and very often the ETF's name, will tell you whether the ETF employs currency hedging.

The currency risk of unhedged ETFs is discussed in Topic 4.

	Hedged	Unhedged
Currency exposure?	No	Yes
Management fee	Higher	Lower
Currency moves in your favour	No impact	Benefit
Currency moves against you	No impact	Disadvantage



## Topic 4: Risks of commodity ETFs

Investing in commodity ETFs involves risk. For comprehensive coverage of these risks, please refer to the issuer's website or supporting Product Disclosure Statement (PDS).

The two main risks that are particularly relevant to commodity ETFs are:

- commodity price risk, and
- currency risk (if the ETF does not hedge its currency exposure).

If the ETF uses a synthetic structure, there may also be counterparty risk.

For coverage of other risks that apply to all ETFs, please refer to Module 1.

### Commodity price risk

In \$US terms, the price of the ETF aims to track the spot price of the commodity, or the value of a nominated commodity index.

Ignoring any currency effect, if the price of the commodity falls, the value of your ETF will fall.

Commodity prices can be volatile. Prices can rise or fall significantly in a short period of time.

### Currency risk

You buy and sell ETFs on ASX in \$A, however commodities are traded in \$US.

If a commodity ETF does not hedge its currency exposure, you are exposed to the risk of an unfavourable movement in the \$A/\$US exchange rate.

A strengthening of the \$A against the \$US works against you. A weakening of the \$A works in your favour.

Currency risk is not present in hedged ETFs.



\$A vs. \$US	Commodity ETF price
↑	↓
↓	↑



## How important is currency risk?

Currency movements can have a significant effect on the price of an unhedged ETF.

An increase in the \$A against the \$US can lead to a fall in the value of the ETF even if the price of the commodity increases in \$US terms. The relative strengths of the exchange rate and commodity price movements are important.

## Counterparty risk

If a commodity ETF uses a synthetic structure, there is the risk that the counterparty to the swap agreement will not meet its obligations to the fund.

If the counterparty defaults on its obligations, the ETF would have full recourse to the assets that are held by a custodian as part of the fund structure. However the ETF is likely to suffer a loss in value in line with the amount owed by the counterparty.

## Counterparty risk management

ASX has requirements designed to reduce counterparty risk.

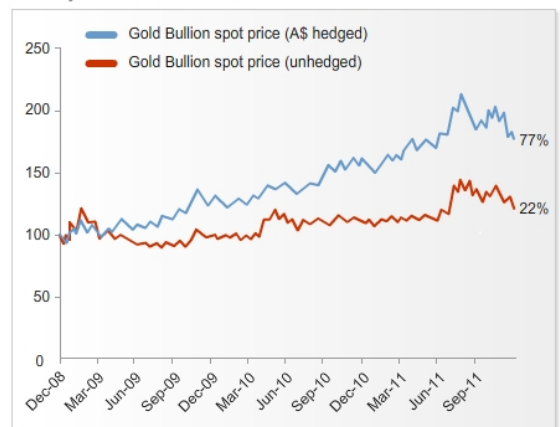
There is a limit on the exposure an ETF can have to counterparties. Under ASX rules, counterparties can owe an ETF no more than 10% of the fund's net asset value (NAV). If that limit is breached, the ETF must take action immediately to reduce the exposure.

In practice, issuers may have even stricter requirements in place.

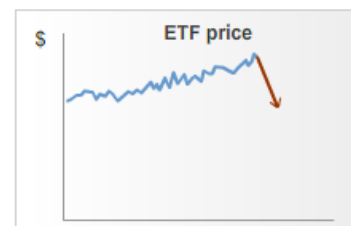
Some issuers have a 'zero exposure threshold'. Each day, the ETF's credit exposure is revalued. If funds are owed under the swap agreement, a cash payment of the full amount owing must be made promptly to bring the exposure back to zero.

There are also restrictions on which counterparties ETFs can enter into derivatives contracts with. Australian banks and certain authorised foreign banks are eligible.

Gold bullion spot price performance hedged vs. unhedged:  
1 January 2009 - 31 December 2011



If the swap counterparty owes the ETF money and defaults on its obligations your ETF will fall in value.



## Summary

- Commodity ETFs offer a convenient way to get exposure to commodities without having to directly trade the commodity itself.
- A physically-backed ETF holds the underlying commodity, and aims to track the commodity's spot price.
- A synthetic ETF generally tracks an index that is based on futures contracts over the underlying commodity. It typically invests the fund's assets in cash, and enters a swap agreement with a counterparty to receive the performance of the index being tracked.
- An ETF that tracks an index based on a commodity futures contract may perform differently to the physical commodity itself.
- An ETF will either hedge its currency exposure, or leave it unhedged.
- A currency-hedged ETF gives you pure exposure to the performance of the commodity.
- An unhedged ETF means you are exposed to the performance both of the commodity and of the \$A against the \$US. A strengthening of the \$A against the \$US works against you. A weakening of the \$A works in your favour.
- If a commodity ETF uses a synthetic structure, there is the risk that the counterparty to the swap agreement will not meet its obligations to the fund.
- ASX has requirements designed to reduce counterparty risk.