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COMMODITIES · BEGINNER · LESSON 5 OF 15

How Futures Work

Long and short, the clearing house, margin and daily settlement, leverage, and what happens when a contract expires

13 min read 8 quiz questions with answer key

COMMODITIES · BEGINNER · LESSON 5 OF 15

How Futures Work

IN ONE SENTENCE

A futures contract is a standard agreement to buy or sell a commodity at a price fixed today for a date in the future. A clearing house stands between every buyer and seller, each side puts up margin as a deposit, and gains and losses are paid in cash every day. Because the margin is small compared with the contract's value, futures are highly leveraged. Every contract expires, and traders who do not want delivery must close or roll their position in time.

An agreement about a future price

A **futures contract** fixes three things today: **what** will be traded (the commodity, its grade and its amount), **when** (the delivery month) and **at what price**. Everything except the price is set by the exchange, so all contracts for the same month are identical. The only thing traders negotiate is the price.

- The buyer is **long**. He agrees to buy at the agreed price, so he gains if the market price rises.
- The seller is **short**. She agrees to sell at the agreed price, so she gains if the market price falls.

You do not need to own a commodity to sell a futures contract on it. Going short is as easy as going long, which is one reason traders use futures. For every long position there is exactly one short position, so the total gains of all longs always equal the total losses of all shorts, and the other way round.



Figure 1. The buyer of a futures contract is long and gains when the price rises. The seller is short and gains when it falls.

The clearing house in the middle

If David agrees to buy gold from Emma in three months, he has to trust that Emma will still be able to deliver, and she has to trust that David will be able to pay. That trust problem is called **counterparty risk**.

Futures exchanges solve it with a **clearing house**. As soon as a trade is matched, the clearing house becomes the seller to David and the buyer to Emma. Neither of them needs to know or trust the other. Each only has to deal with the clearing house, which protects itself by collecting margin from both sides and settling gains and losses every day. CME Group, ICE and the other big exchanges each run their own clearing houses.

This structure is a big difference between futures and CFDs. With a CFD, the broker is your counterparty. With a futures contract, it is the clearing house.



Figure 2. The clearing house becomes the counterparty to both sides, so buyers and sellers do not need to trust each other.

Margin and daily settlement

When you open a futures position, you do not pay the contract's full value. You deposit **initial margin**, a good-faith deposit set by the exchange (your broker may ask for more). Every evening, the exchange sets a **settlement price** for each contract, and your gain or loss for the day is added to or taken from your account in cash. This daily process is called **marking to market**.

If losses push your account below the **maintenance margin**, a lower level, you receive a **margin call**: you must add money to bring the account back up to the initial margin, or your broker can close the position.

Here is an example. David goes long 1 Micro Gold futures contract (10 troy ounces) at **$4,000**. Suppose the initial margin is **$2,000** and the maintenance margin is **$1,800**.

Day	Settlement price	Daily gain or loss	Account after settlement
Start	$4,000 (entry)		$2,000
Day 1	$4,030	+$300	$2,300
Day 2	$3,950	-$800	$1,500: below $1,800, margin call. David adds $500
Day 3	$3,990	+$400	$2,400

Each $1 move in the gold price changes a 10 ounce contract by $10. After three days, gold is $10 below David's entry price, so his total result is -$100: he has put in $2,500 and his account holds $2,400. Notice that he had to find extra cash on Day 2, even though the market later recovered.

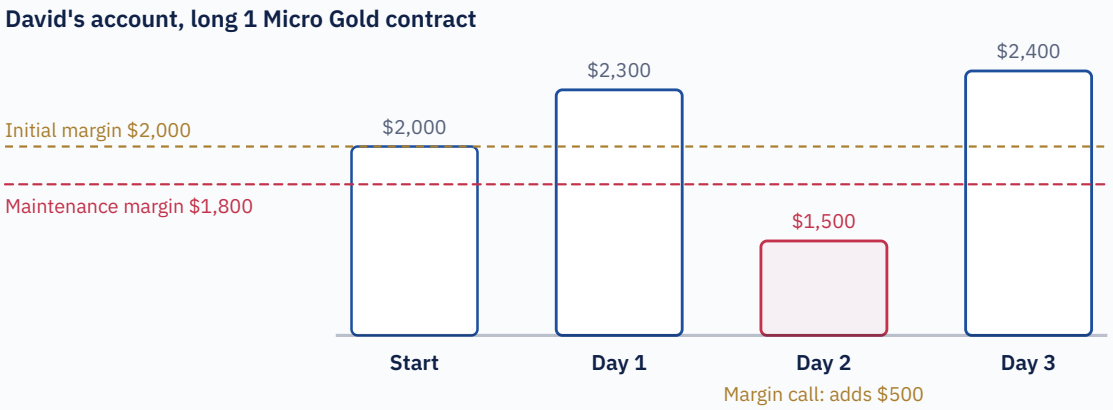


Figure 3. Daily settlement moves David's account up and down. On Day 2 it falls below the maintenance margin, and he must add $500.

Leverage: a small deposit, a large exposure

Because margin is only a small part of a contract's value, futures are highly **leveraged**. A small price move becomes a large share of the money you put up.

Gains and losses are always calculated on the full value of the contract, not on the margin. Treat the full value as the size of your position, and decide how much of your account you can afford to have at risk on that basis.

EXAMPLE: ONE STANDARD GOLD CONTRACT

On October 5, 2026, CME Group estimated the value of one standard gold futures contract (100 troy ounces) at about **$415,710**, with an exchange margin of about **$20,677**, roughly 5% of the value.

If gold moves 1%, the contract gains or loses about $4,157, about **20% of the margin**. If gold moves 5% against the position, the loss is about $20,786, roughly the **whole margin**. A move of that size in gold can happen within days.

Expiry: delivery or cash

Every futures contract has a **last trading day**. After it, the contract is settled in one of two ways:

- **Physical delivery.** Sellers deliver the real commodity and buyers pay for it, at approved locations and under exchange rules. Standard WTI crude oil, gold and corn futures at CME Group are physically delivered.
- **Cash settlement.** No goods change hands. Open positions are closed at a final price, and the difference is paid in cash. Some smaller contracts, such as Micro WTI crude oil futures, settle this way.

For physically delivered contracts, the delivery process can begin before the last trading day. Holders of long positions may receive a delivery notice from the **first notice day**, so most brokers ask individual traders to close or roll their positions before then. Each contract's rules list these dates, as Lesson 6 explains.

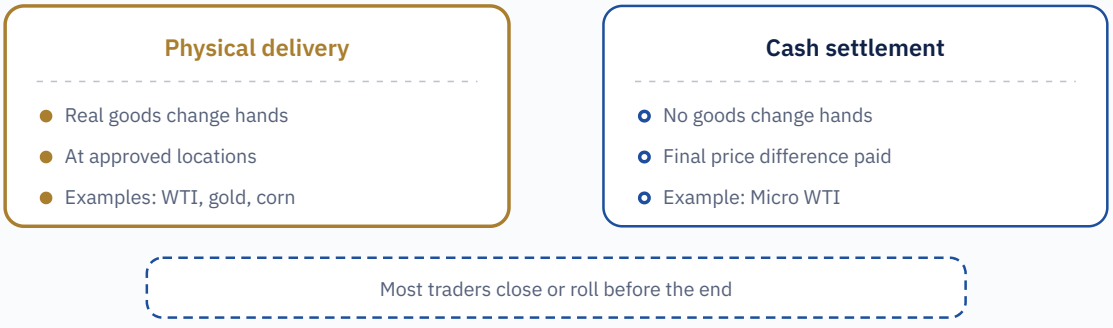


Figure 4. At expiry, a contract ends either in physical delivery or in cash settlement.

When holding too long went wrong: April 2020

The most famous lesson about expiry comes from April 2020. Lockdowns had cut world oil demand sharply, and storage at Cushing, Oklahoma, the delivery point for WTI crude oil futures, was close to full.

On **April 20, 2020**, the day before the May WTI contract's last trading day, traders who still held long positions but could not take delivery rushed to sell. With almost nowhere to store oil, buyers demanded to be paid to take it. The May contract settled at **-$37.63 a barrel**, the first negative price since WTI futures began trading 37 years earlier. On the same day, the June contract settled at **$20.43**.

The lesson is not that oil can be "free". It is that a futures contract is a promise about real goods at a real place. Close to expiry, the contract's price depends on who can actually make or take delivery. Most traders, and most funds, had already moved to later months before that day.



Figure 5. On April 20, 2020, the expiring May WTI contract settled at -$37.63, while the June contract settled at $20.43.

Closing, rolling and open interest

Most futures positions never reach expiry. A trader who is long simply sells the same contract to close it, and a trader who is short buys it back. To keep a position for longer, traders **roll** it: they close the contract that is about to expire and open the same position in a later month. The price difference between the two months can add to or subtract from returns, as Intermediate Lessons 1 and 2 explain.

Two numbers show how active a futures market is:

- **Volume** is the number of contracts traded during a day.
- **Open interest** is the number of contracts still open at the end of the day. It rises when a new buyer and a new seller open positions, and falls when existing positions are closed.

When a contract approaches expiry, its open interest falls and the next month becomes the most active. Charts that show a "continuous" futures price join these months together, which is why they sometimes jump on roll dates.

Why this matters for traders

- **Size by full value, not by margin.** Your profit and loss come from the whole contract. Know what a 1% move means in dollars before you trade.
- **Keep spare cash.** Losses are taken from your account every day. Without spare cash, a temporary move against you can force you out before the market recovers.
- **Watch the calendar.** Know the first notice day and last trading day of every contract you hold. Close or roll in good time.
- **Check which month your chart shows.** Front month, continuous and back month charts can differ. Make sure your analysis matches the contract you trade.

Key terms

Long	A position that gains when the price rises. In futures, the buyer of a contract is long.
Short	A position that gains when the price falls. In futures, the seller of a contract is short.
Counterparty risk	The risk that the other side of a trade fails to pay or deliver.
Clearing house	The organisation that becomes the buyer to every seller and the seller to every buyer on an exchange, guaranteeing trades.
Initial margin	The deposit required to open a futures position, set by the exchange. Brokers may ask for more.
Maintenance margin	The minimum account level for keeping a position open. Below it, a margin call is issued.
Margin call	A demand to add money to an account that has fallen below the maintenance margin.
Marking to market	Settling gains and losses in cash every day, based on the exchange's daily settlement price.
First notice day	The first day on which holders of long positions in a physically delivered contract can be told to take delivery.
Open interest	The number of futures contracts still open at the end of a trading day.

Key takeaways

1. A futures contract fixes the commodity, amount, grade, delivery month and price today. Buyers are long and gain when prices rise; sellers are short and gain when prices fall.
2. A clearing house stands between every buyer and seller, removing the need to trust the other side.
3. Traders deposit initial margin, gains and losses are settled in cash every day, and an account below the maintenance margin gets a margin call.
4. Margin is only about 5% of a gold contract's value, so a 1% move is about 20% of the margin. Always size positions by the full value.
5. Contracts end in physical delivery or cash settlement. Close or roll before the first notice day; April 2020, when May WTI settled at -$37.63, shows what can happen near expiry.

Test yourself

Circle one answer for each question. The answer key with explanations is on the next page. You can also take this quiz online at markettalks.info and see your score instantly.

1. A trader sells a crude oil futures contract. What is her position, and when does she gain?

- A Long; she gains if the price rises
- B Short; she gains if the price falls
- C Short; she gains if the price rises
- D She has no position until delivery

2. What does the clearing house do?

- A It sets the price of every trade
- B It becomes the buyer to every seller and the seller to every buyer, guaranteeing trades
- C It stores the commodities for traders
- D It gives traders advice

3. What is initial margin?

A The full price of the contract
B A good-faith deposit required to open a futures position
C A fee paid to the exchange that is never returned
D The profit on a trade

4. David is long 1 Micro Gold contract (10 oz). Gold settles $80 lower than the day before. How much is taken from his account?

A $8
B $80
C $800
D $8,000

5. David's account falls to $1,500. His maintenance margin is $1,800 and his initial margin is $2,000. What happens?

A Nothing, he still has money
B He receives a margin call and must add about $500, or the position can be closed
C The exchange cancels his trade with no loss
D He must take delivery of gold

6. A gold futures contract worth about $415,710 needs about $20,677 of margin. If gold moves 1% against the position, roughly what share of the margin is lost?

A About 1%
B About 5%
C About 20%
D About 100%

7. Why do most brokers ask individual traders to close or roll positions in physically delivered contracts before the first notice day?

A. Because prices stop moving after that day

B. Because from then on, holders of long positions may have to take delivery of the real commodity

C. Because margin is no longer required

D. Because the exchange closes

8. On April 20, 2020, the May WTI crude oil futures contract settled at -$37.63. What was the main reason?

A. Oil companies stopped producing oil

B. Traders holding the expiring contract could not take delivery, and storage at the Cushing delivery point was almost full

C. The exchange made a pricing error

D. All oil futures went negative for months

Answer key

1 B

Short; she gains if the price falls

The seller of a futures contract is short. She agreed to sell at a fixed price, so she gains if the market price falls below it.

2 B

It becomes the buyer to every seller and the seller to every buyer, guaranteeing trades

Once a trade is matched, the clearing house steps in between the two sides, so neither has to trust the other. It protects itself by collecting margin and settling gains and losses daily.

3 B

A good-faith deposit required to open a futures position

Initial margin is a deposit, not a payment for the commodity. It stays in your account and changes each day with your gains and losses.

4 C

$800

Each $1 move on a 10 ounce contract is worth $10, so an $80 fall costs 80 × $10 = $800.

5 B

He receives a margin call and must add about $500, or the position can be closed

His account is below the maintenance margin, so he must bring it back up to the initial margin of $2,000 by adding $500, or his broker may close the position.

6 C

About 20%

1% of $415,710 is about $4,157, which is about 20% of $20,677. That is the effect of leverage.

7 B

Because from then on, holders of long positions may have to take delivery of the real commodity

From the first notice day, the delivery process can start. Traders who cannot make or take delivery should be out of the contract before then.

8 B

Traders holding the expiring contract could not take delivery, and storage at the Cushing delivery point was almost full

With storage nearly full, holders of the expiring May contract who could not take delivery had to pay others to take it. The June contract settled at $20.43 the same day.

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