NAVIGATING RISK

A BRIEF GUIDE TO
THE DERIVATIVES MARKETPLACE
AND ITS ROLE IN ENABLING
ECONOMIC GROWTH

How does a U.S. manufacturer more profitably sell products in a new country? Where does a technology startup get the confidence to innovate? How do farmers protect themselves from fluctuating commodity prices? What reduces financial risk for banks doing business in foreign countries? How do universities protect the value of their endowments? How do investors turn risk into opportunity?

In business and financial management today, these are among the biggest questions. The answer is *derivatives,* the fundamental risk management tool for anyone who wants to advance with confidence in an uncertain world. And that's what this book is all about.

What is CME Group all about?

It’s really quite simple.

2+2=4

WELL, NOT QUITE THAT SIMPLE. CME Group is one of the most complex and specialized businesses in the world, with enormous global impact, lots of terminology, a vast network of customers, tons of economic formulas and complicated technical analysis.

But it all boils down to dealing with something we all face…

RISK

If you run a business in today's world or if you manage money for investors, risk is all around you, every day. For some, risk is what stands between them and progress. For others, risk represents an opportunity to invest.

So what does risk look like?

1 Let's say you're in the business of making corn flakes. You're at risk of corn prices rising because a hot, dry summer is about to reduce the harvest.

2 Or maybe you're a U.S. manufacturer buying parts in Europe. You're worried that the Euro is going to rise, making the parts you need more expensive.

3 You might even be a resort developer building a new hotel, and you need to protect your investors from construction delays that severe storms might cause.

4 Perhaps you run an airline, and you believe rising fuel prices are going to eat into your forecasted profits.

5 Or maybe you manage a university endowment, and you need to protect your portfolio from changes in U.S. Treasury bond rates.

6 You may be an auto manufacturer facing unpredictable costs for metals, but you still need to deliver new product cost-effectively.

What if there were a place that helped you navigate these kinds of business and financial risks?

What if someone was interested in taking over the very risk you wanted to avoid?

That's what CME Group is all about. And it's how we help the world advance.

WE ARE THE PARENT COMPANY OF A GROUP OF DERIVATIVES EXCHANGES – a marketplace for buyers and sellers. We bring together people, companies and institutions that need to manage risk or that want to profit by accepting risk. It's this trading of positions – and the opportunity to create value – that enable businesses and the world's economy to advance.

THE BIG ECONOMIC PICTURE

Before we can explain how the business of managing risk works, let's take a little refresher course in economics – specifically, the simple balance between supply and demand.

THINK OF IT THIS WAY – the cost of just about everything in the world has to do with how much of it there is and how badly people want it. If there's more supply of something, the price for it tends to go down. If there's more demand, the price tends to go up.

When buyers and sellers agree on a price that's right for both of them at that moment, they make a trade, and the price is set.

Let’s try it with something more tangible.

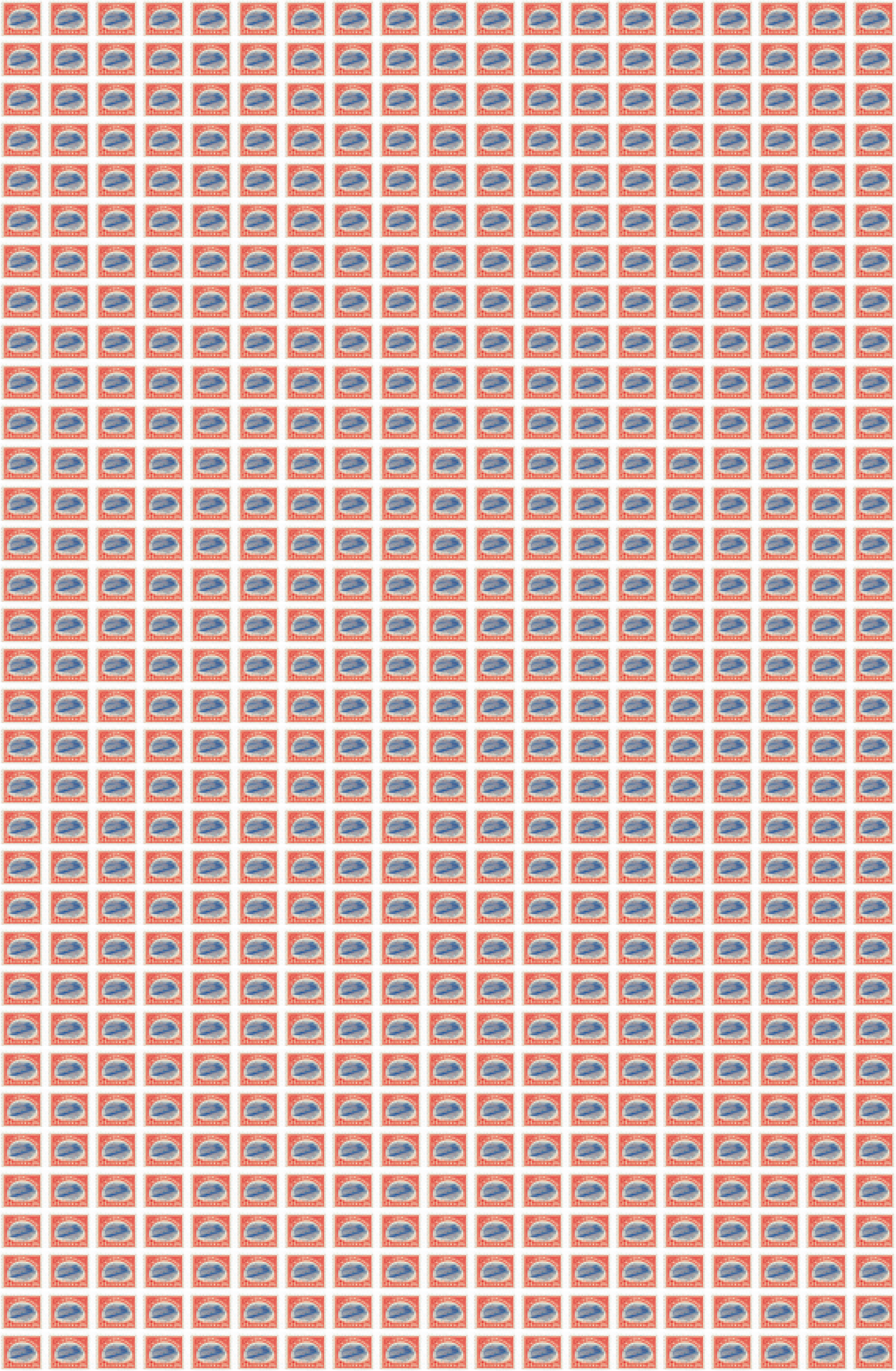
This is an Inverted Jenny U.S. postage stamp from 1918.

SUPPLY

It’s in such short supply that people have paid nearly one million dollars for just one of these stamps. Now, let’s say someone, somehow, discovered millions of this particular stamp. It wouldn’t be nearly as rare, would it?

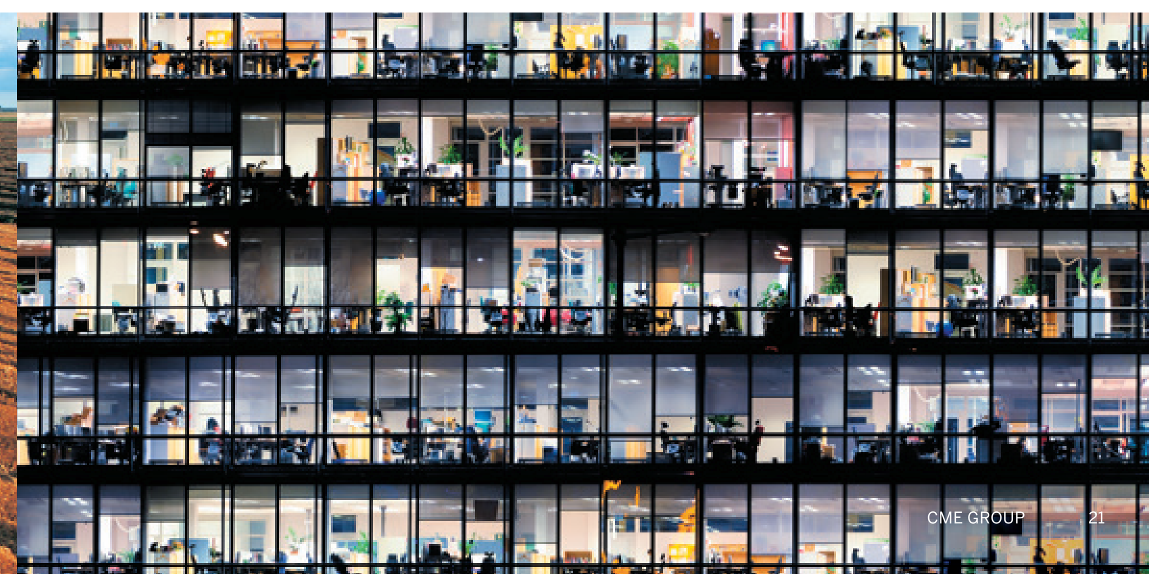
DEMAND

If this happened, people wouldn’t be willing to pay as much for the stamps, and the price would drop to about the cost of a box of plain envelopes. So, when supply is tight, prices go up. When there’s more supply, prices go down.



But the world doesn't operate on some fantastic, postage-stamp-based economy.

THE WORLD ECONOMY IS BASED ON ALL SORTS OF THINGS THAT ARE BOUGHT AND SOLD EVERY DAY. CME Group provides markets for them – from agricultural crops and livestock; to metals and natural resources; to interest rates, stock indexes and foreign currencies. It truly is a global marketplace, and CME Group is one of the world's leading forums for buying and selling.



ABOUT DERIVATIVES

When people and companies come to the CME Group marketplace to buy and sell commodities and financial products, what they're really trying to do is remove risk from their business or make money as an investor when prices fluctuate.

BOTTOM LINE – you don't know the future. But futures, options and cleared over-the-counter derivatives help create a safety net in case prices move in the wrong direction.

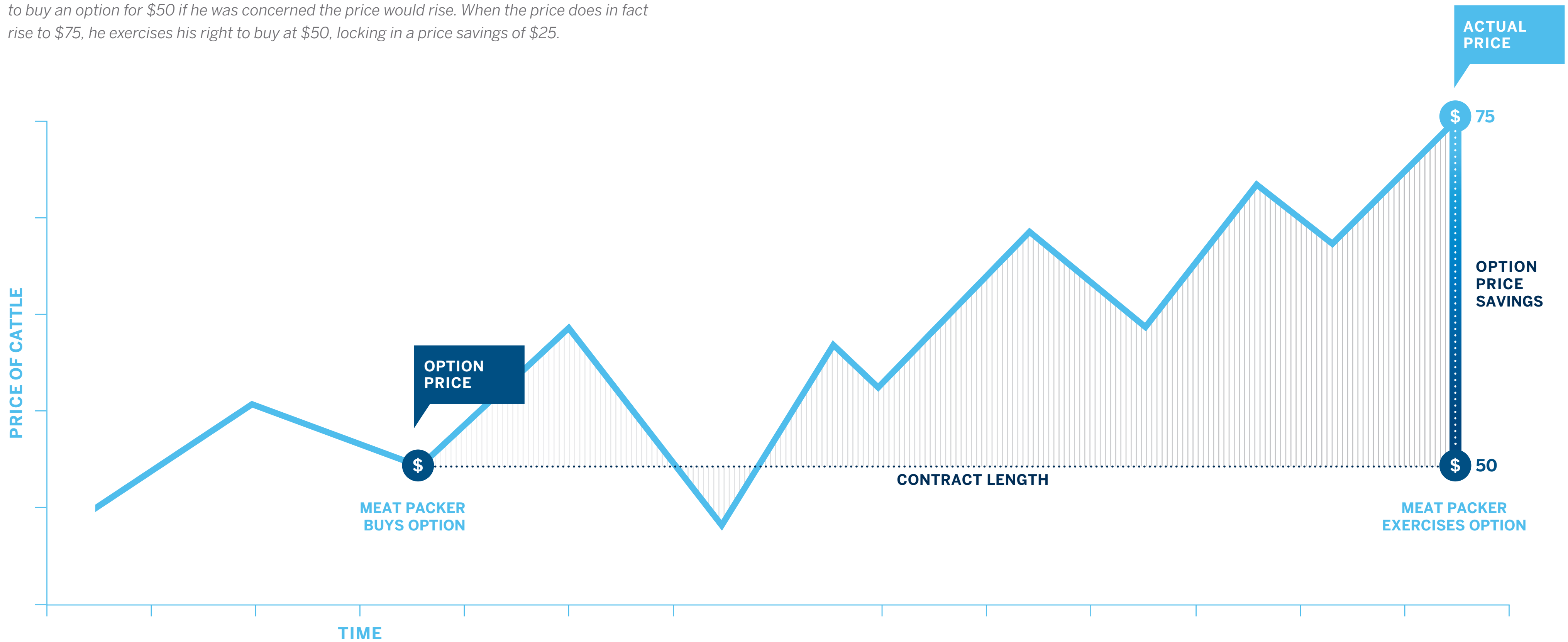
Why derivatives?

BECAUSE PRICES MOVE ALL THE TIME. If you've ever bought or sold a home, a car or shares of stock, you know that the price of what you buy or sell today could be higher tomorrow, or it could be worth less. But there is a way for individuals and businesses everywhere to lock in a future price by putting it into a binding contract. These products are called *futures* and *options* – contractual agreements to buy or sell an amount of something at a fixed price at a future date.

CME Group is where people come to trade futures and options contracts on the widest range of global benchmark products, based on interest rates, equity indexes, foreign exchange, energy, agricultural commodities, metals, weather and real estate. Increasingly, investors are choosing to clear their over-the-counter derivatives at CME Group as well.

Long option on futures.

In this example, the meat packer may not need the beef for several months but would decide to buy an option for $50 if he was concerned the price would rise. When the price does in fact rise to $75, he exercises his right to buy at $50, locking in a price savings of $25.



A FUTURES CONTRACT locks in the price of an item for delivery, or cash settlement, at a future date.

These items – oil, cattle, euros, corn and so on – are the drivers of the global economy. Before any of these items actually shows up at a buyer's doorstep, though, the owner of the contract can sell it to another buyer. In fact, most futures contracts are sold long before the potential delivery date. Only someone with a need for the product would take delivery of the final contract.

AN OPTION ON A FUTURES CONTRACT guarantees a buyer's right, but not his obligation, to buy or sell a futures contract at a fixed price.

If a buyer isn't sure he wants a futures contract, an option makes it so he's not obligated to buy the futures contract – but he does have the option. That way, if market prices rise or fall between today and some point in the future, traders can exercise their options, avoid a risk, and potentially profit from the change in price.

WHY OPTIONS? Buying a futures contract can put a trader at risk for huge losses down the line, but options provide the flexibility to make the right decision at the right time.

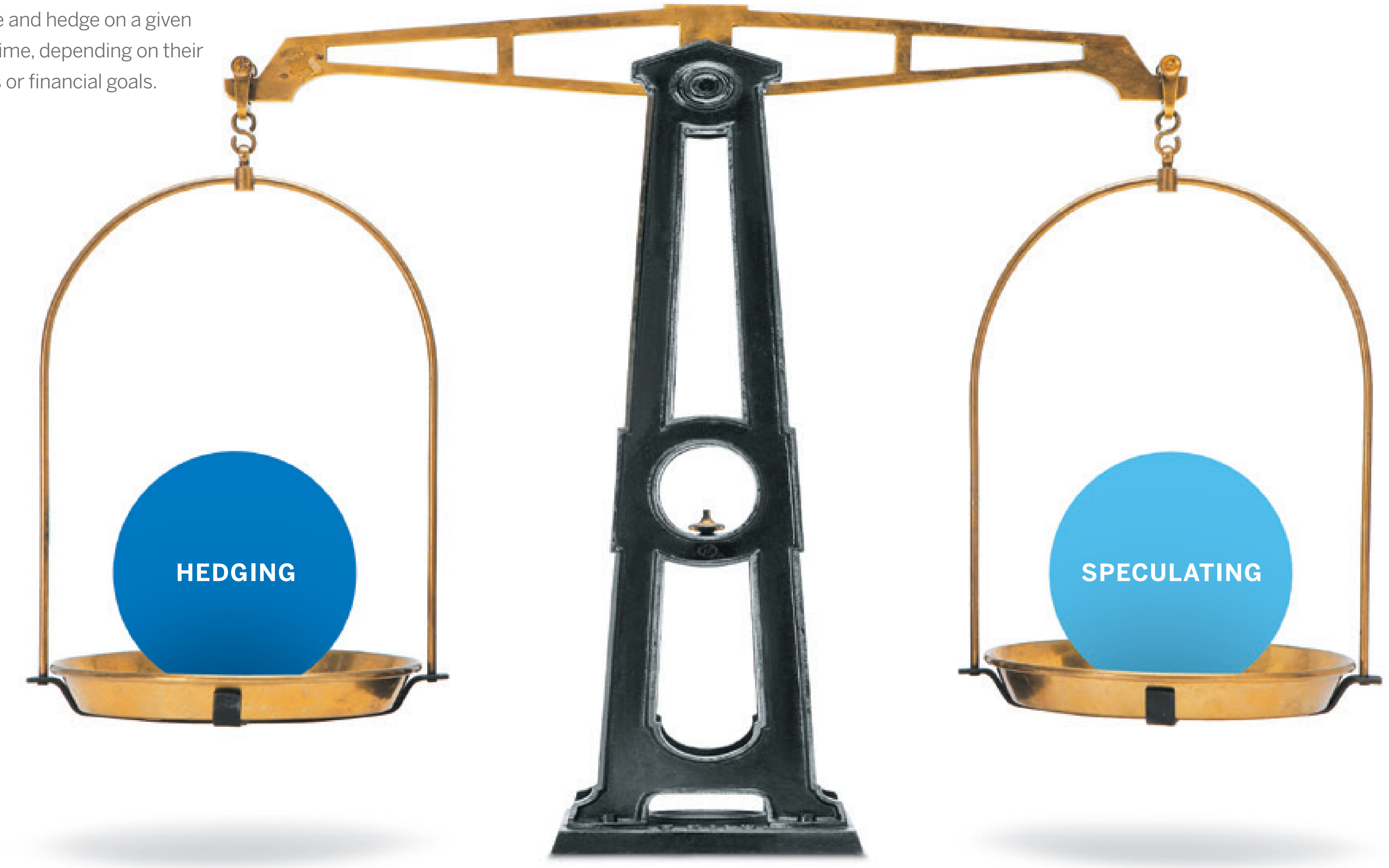
MAKING THE TRADE

All kinds of people come to CME Group to buy and sell futures and options contracts. They could work for banks, corporations or governments. They could be livestock ranchers, investment managers, construction planners, farmers or food manufacturers. Really, it involves just about anyone in the world who wants to manage the risk of fluctuating prices.

TRADERS AT CME GROUP are interested in two types of trading: *hedging* and *speculating*. Futures and options markets depend on a balance of both.

The two sides of trading.

Individual traders, trading firms, investors and corporate risk managers could speculate and hedge on a given market at any time, depending on their business needs or financial goals.



HEDGING LETS TRADERS TRANSFER RISK

Hedging manages risk by locking in a future price for a product – protecting traders from swings in the prices of products. By smoothing out the ups and downs in the price of something, a business can make its costs – and the profit it can make – more predictable.

SPECULATING LETS TRADERS TAKE ON RISK

Speculating absorbs risk in pursuit of profit. When traders speculate, they're investing – buying and selling contracts in order to make a profit when prices move. Before they accept this kind of risk, though, they do some very technical math to decide when it makes sense for them to accept the risk.

Different traders have different needs.

CME Group provides a forum for both hedging and speculating, serving the needs of a wide range of clients.

Let's take a look at six different types of traders who use CME Group markets.

COMMERCIAL TRADER

This trader helps a business make better financial decisions. Let's just say it's an airline that comes to CME Group to hedge its fuel prices. As a result, the airline can fly more flights and serve more customers because it's better able to predict and manage its fuel costs.

COMMODITY TRADING ADVISOR (CTA)

A CTA is a trader working as part of a hedge fund that wants to use the futures and options market to grow its portfolio and make money for investors. Despite its name, a hedge fund doesn't just hedge – in fact, it's much more likely to take on risk that will make more profit in the end.

FUTURES COMMISSION MERCHANT (FCM)

FCM is the industry term for a futures brokerage firm licensed to trade on U.S. futures exchanges. It can trade futures and options at a CME Group exchange from its own funds, as well as on behalf of a customer.

ELECTRONIC MARKET MAKER

The electronic market maker develops complex algorithms and computer models that enable it to trade derivatives and then display its buying and selling prices to other traders. This company adds speed, transparency and liquidity to the entire market, and may help customers get their trades done more quickly and at more competitive prices.

ASSET MANAGER

This trader can come from virtually any kind of organization. For example, a university will have someone on staff to help protect the value of its endowment. This person comes to CME Group to help meet the university's investment goals so it can put more money toward granting scholarships, upgrading resources and facilities, and hiring professors.

PROPRIETARY TRADER

The proprietary trader is a speculator who takes a position or multiple positions in the market as an investment based on his view of how the market will perform in the future. This trader plays a critical role in the function of the market overall by taking both sides of the market, adding to competitive price discovery and liquidity.

WHY LIQUIDITY HELPS

Hedging and speculating bring balance to the market and keep trades flowing back and forth. A trade becomes "liquidated" when you buy or sell back your contract at the market price. The more trading there is in a particular market, the easier it is to find someone who's buying what you're selling, which allows you to get in and out of a market quickly. That's liquidity. And very often it is a speculator who provides the liquidity to help someone else hedge. That's efficiency.

TO BETTER ILLUSTRATE THIS CONCEPT let's first imagine that you're in a very risky position in the market, and you want to exchange it for a less risky position.

WITHOUT ENOUGH LIQUIDITY IN THE MARKET and someone to trade with, you're in a rather confined space.

When there are other contracts to buy or sell, you stand a much better chance of finding a partner to take on your risk in hopes of profiting later.

And when you have a really active market – full of participants and contracts being bought and sold – you have the best chance of finding a willing partner to absorb your risk. Or if you're speculating, you're more likely to find a contract that may enable you to profit from taking on someone else's risk.

This liquidity is exactly what CME Group is particularly known for – being one of the most liquid futures and options markets in the world.

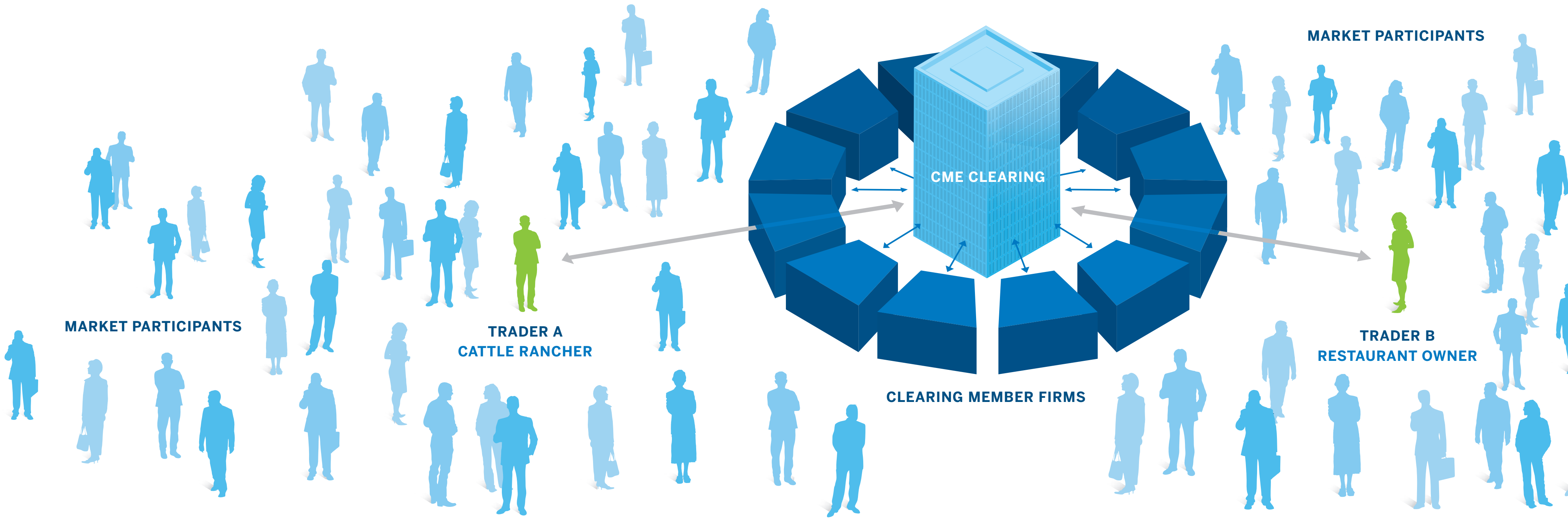
PROTECTING TRADING PARTNERS

Clearing is another fundamental role that CME Group provides in financial markets. Long before a trade goes from point A to point B, our clearing firms check the financial strength of both parties, whether they're a big institution or an individual trader. We make sure that the buyer and seller agree on the price, quantity and timing of the contract. Then, when the contract is liquidated – whether two milliseconds or two months later – we guarantee the terms to which each party originally agreed.

THIS IS HOW WE CLEAR every single trade that comes through a CME Group exchange.

The counterparty to every trade.

In this example, Trader A is a cattle rancher who wants to sell a futures contract on his cattle so he can lock in a price and protect himself against unforeseen price risk such as extreme weather conditions. Trader B is a restaurant owner willing to absorb that risk. She wants to buy the cattle contract in order to make her meat costs more predictable and offer consistent prices and value for her customers.



Clearing is the backbone of our business, coordinating a complex set of operations that must work seamlessly and function flawlessly to meet the requirements of our financial safeguards system. Within the CME Group organization, CME Clearing is the division that monitors and processes all trades and ensures the financial integrity of each transaction. It provides clearing and settlement services for exchange-traded contracts and cleared over-the-counter derivatives.

CME CLEARING AND CME CLEARING EUROPE

CME Group provides clearing services for customers around the globe through two clearing houses: CME Clearing and CME Clearing Europe. In this centralized clearing process, the clearing house acts as the counterparty to every trade, becoming the buyer to each seller and the seller to each buyer. This limits counterparty credit risk, and therefore mitigates the risk of default.

CLEARING MEMBER FIRMS

Clearing member firms are firms approved to clear trades through CME Clearing or CME Clearing Europe. They stand between the clearinghouse and customers – including individual traders, institutions and brokers, collectively known as market participants. They are the guarantor of the financial commitments of their customers.

From the floor

When a trade is executed, the price is seen simultaneously by everyone in the market. It flashes on enormous electronic signs above our trading floors where hundreds of traders are making deals.

To the screen

The price also appears on computer screens globally. In fact, you don't have to be in Chicago to trade at CME Group. That's because of CME Globex, CME Group's electronic trading platform used by our customers around the world. More than 80% of the trading at CME Group is done electronically.

POWERFUL TECHNOLOGY, BUILT FOR SPEED.

CME Globex can complete more than 500 trades every second, that's one trade in less than 2 milliseconds. *(And it's getting faster all the time.)*

Speed of CME Globex
+ Our worldwide trading hubs
x Liquidity of our markets

= 3 billion contracts traded annually, worth $1,000,000,000,000,000 (1 quadrillion)

CME Group's global impact

WE'VE COVERED WHAT CME GROUP DOES – now let's talk about what we create. Actually, it's less about what we make – it's what we make possible. CME Group helps businesses around the world navigate uncertainty. We give them the confidence to make better decisions faster, which can help them expand and grow.

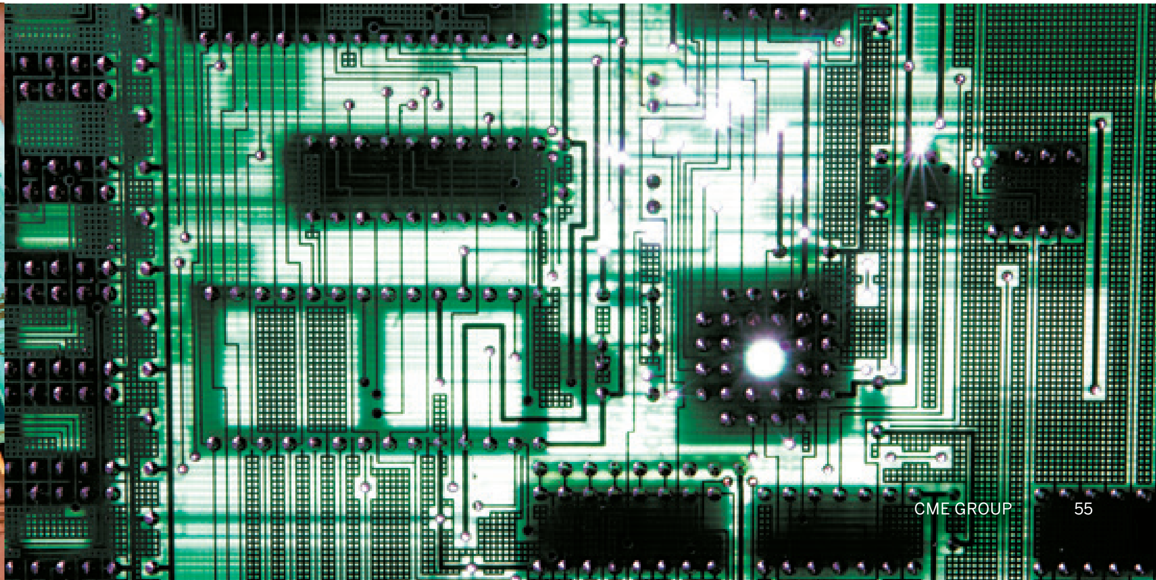
That sense of confidence is what helps the world advance.

WHEN MANUFACTURERS HAVE CONFIDENCE, they can put more money into creating new products, and begin offering them to more consumers in different countries.

WHEN DEVELOPERS HAVE CONFIDENCE, they can put more money into new building projects, and serve more clients in different markets.

WHEN FINANCIAL INSTITUTIONS HAVE CONFIDENCE, they can make the loans that help small- and mid-size companies innovate and grow.

WHEN COMPANIES AND ORGANIZATIONS HAVE CONFIDENCE, they can make faster, smarter decisions that move their businesses forward.



AND WHEN THESE COMPANIES DO WELL, it gives people the confidence to invest in them, which helps grow economies and create more jobs.

Simply put, our markets are designed to provide the confidence that helps accelerate prosperity and progress all over the world.

For additional information on how CME Group manages risk and helps the world advance, please visit www.cmegroup.com/advance

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