Raiffeisen Centrobank AG

HOW TO INVEST IN OIL MARKETS
THE FUTURES MARKET & PARTICIPATION CERTIFICATES

March 2020

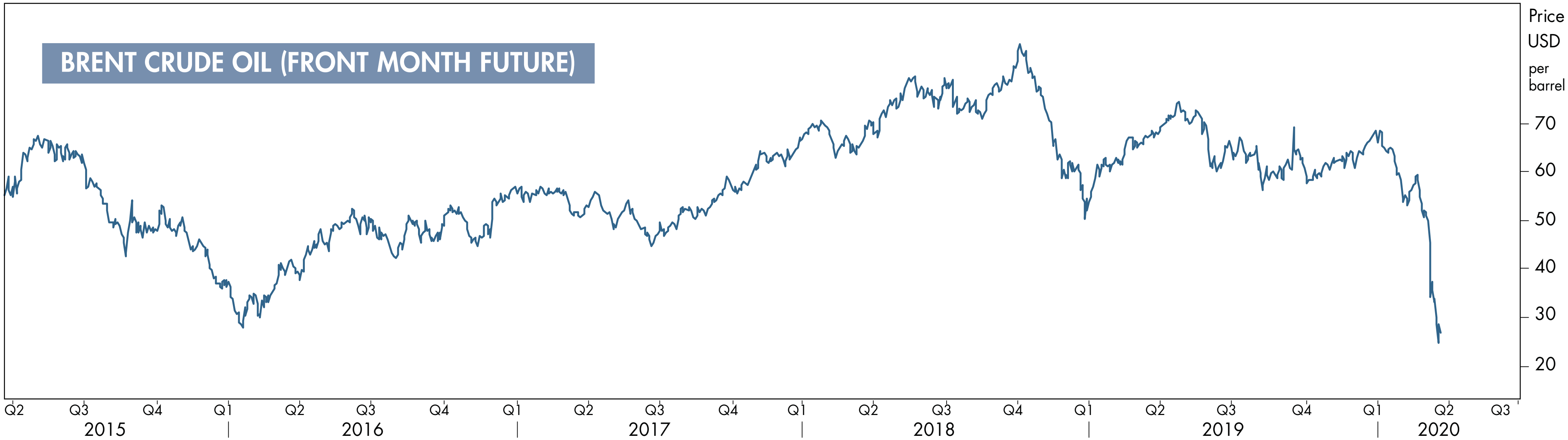
Certificates by

Raiffeisen CENTROBANK

HOW TO INVEST IN OIL MARKETS
INTRODUCTION

In the course of the **failed negotiations between Russia and Saudi Arabia** on a reduction in crude oil production (OPEC+), the commodity markets suffered from a spectacular price drop in crude oil prices in March 2020. Further uncertainties on the demand side caused by the impacts of the COVID-19 crisis have added to additional sales pressure. For many investors the current price drop represents an entry opportunity to benefit from future increases of the oil price.

Investments in oil require some further understanding. As such the structured products team of Raiffeisen Centrobank has prepared a guideline on the following pages as to what investors have to be made aware of.



Source: Reuters (LCOc1), as of: March 23, 2020

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HOW TO INVEST IN OIL MARKETS
INTRODUCTION

As physical trading in crude oil is mainly done by large oil trading companies and refineries, private investors revert to certificates based on crude oil. Certificates on crude oil use as underlying the oil price future contract that is traded on the futures market.

Why is this: To offer certificates on oil, the issuing bank needs to be able to trade the underlying for hedging purposes. Banks have no storage capacities for physical oil, hence cannot offer products on the physical commodity. Thus, the solution is to trade oil on the futures markets where various financial instruments are traded with different delivery dates.

All oil investments (e.g. certificates, funds, ETCs) always have a futures contract as underlying instrument.

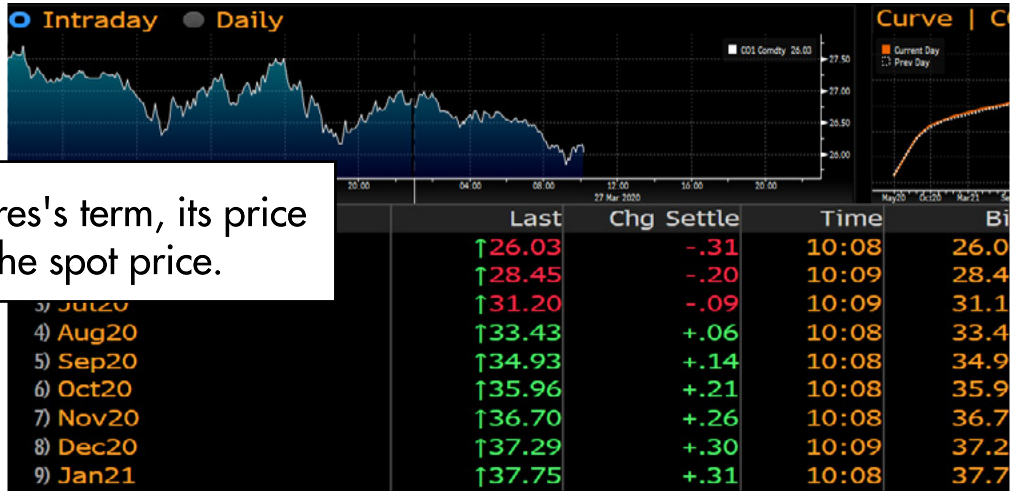
HOW TO INVEST IN OIL MARKETS
SPOT MARKET AND FUTURES MARKET

Spot market: commodity against cash

Oil traders, refineries and other market participants have sufficient storage capacities to trade oil physically on the spot market

Futures: contractual agreement

When using oil investment instruments, the oil price is only reflected by means of futures contracts. In a futures contract, the parties agree to purchase or sell oil at a future delivery date. Futures contracts are traded on commodity exchanges.



At the end of the futures's term, its price is equivalent to the spot price.

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FUTURES
BASICS

As mentioned before, oil investments use futures contracts to reflect the oil price. These contracts have different terms and are traded on commodity exchanges, as for example the **"Intercontinental Exchange" (abbrev, ICE)** . The price of the future depends on the term of the contract. Storage costs, financing costs, insurance costs, geopolitical prospects and expectations of market participants impact futures prices – depending on the term of the contract – to a different extent.

The various futures instruments with different maturities make up the so-called "futures curve", a series of futures prices with different terms plotted together.

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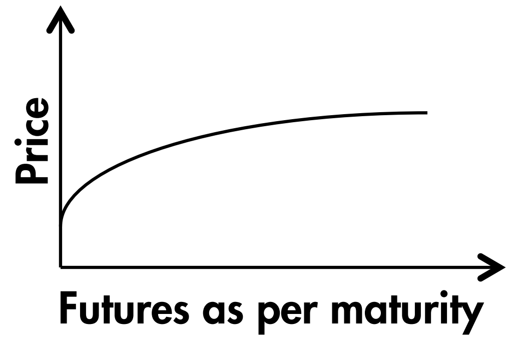
FUTURES CURVES
CONTANGO AND BACKWARDATION

CONTANGO ...

... indicates that the futures contract expiring at a later point in time is more expensive than the one expiring earlier.

Reason: storage costs, financing costs, market expectation

Contango-futures curve

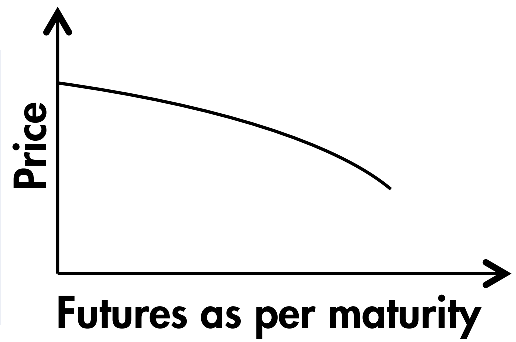


BACKWARDATION ...

... is the market condition wherein the price of a futures contract with a later maturity date is lower than the price of the contract expiring earlier.

Reason: market expects falling prices

Backwardation-futures curve



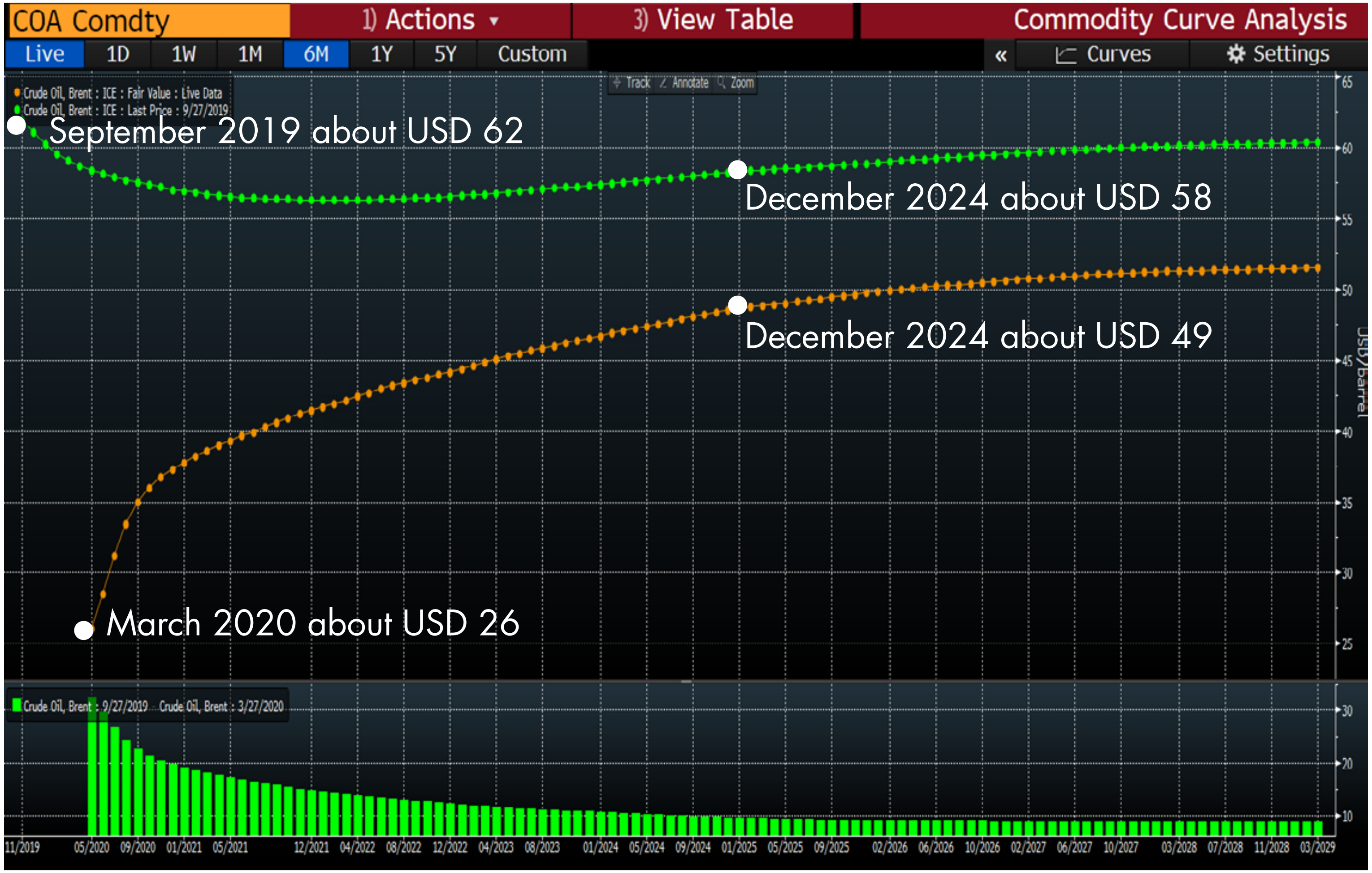
FUTURES CURVES
MARKET OVERVIEW: CONTANGO AND BACKWARDATION

In the past months investors saw shifting curves on the oil market.

In the middle of September 2019, the oil futures market curve was still in a **backwardation situation** in the case of considering futures contracts who were expiring over the next 3 years (the market was therefore already anticipating falling crude oil prices). More precisely this meant that delivery contracts with a delivery date within 2022, for example, was cheaper than futures contracts with shorter residual maturities (i.e. 2020 or 2021).

With the fall in crude oil prices, the situation has changed dramatically within the first few months of 2020 in regard of the futures curve. At the end of March 2020, the market trades again in a pronounced **contango situation**. This means that the longer-dated delivery futures contracts are now significantly more expensive than the short-dated delivery contracts.

THE FUTURES MARKET
BRENT CRUDE OIL



September 2019: market in **backwardation**

March 2020: market in **contango**

Source: Bloomberg, as of: March 24, 2020

Please note that past performance do not allow any inferences to be made about future performances.

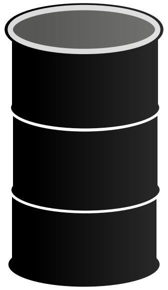
HOW TO INVEST IN OIL MARKETS
RCB INVESTMENT OPPORTUNITIES

Investors can participate in the **performance of the oil markets** in different ways that depend on various factors:

- Investors need to choose between whether they are willing to take market risk, prefer a partial protection or wish to take a leveraged risk investment.
- Investors need to understand the futures market and the impact on their certificate when futures contracts are **rolled over**.
- For most products, a market opinion about the future development of the Euro/USD exchange rate is also necessary ...

THE OIL MARKET
IMPACT OF THE EXCHANGE RATE

Oil



= $

Certificates

= $/€/PLN...

IMPACT OF THE EXCHANGE RATE

A "**stronger USD**" has a **positive** impact on the certificate. USD ↑ Certificate ↑

A "**weaker USD**" has a **negative** impact on the certificate. USD ↓ Certificate ↓

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INVESTING INTO OIL
THE RIGHT PRODUCT FOR EVERY INVESTOR

INVESTMENT PRODUCT

CAPITAL PROTECTION

Guarantee Certificates

Oil Shares Bond

PARTIAL PROTECTION

Bonus Certificates

with safety buffer

1:1 PARTICIPATION

Index/ Participation Certificates

open-end / limited in term

LEVERAGE PRODUCTS

LEVERAGE WITHOUT KNOCK-OUT

Factor Certificates & Warrants

LEVERAGE WITH KNOCK-OUT

Turbo Certificates

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INDEX AND PARTICIPATION CERTIFICATES
OPEN-END INVESTMENTS

Index and Participation Certificates enable investors to participate **1:1** in the performance of the underlying, **e.g. with the RCB Index Certificate with the following ISIN: AT0000A2EFA7**.

RCB offers Participation Certificates on Brent, one of the two most traded oil sorts. The **future with the shortest maturity** (Front Month Future) serves as underlying of the certificate.

Prior to expiration, the future needs to be **rolled** over into the future maturing next to avoid physical delivery of the underlying. When investing into Participation Certificates, **roll over effects** need to be taken into account.

THE FUTURE MARKET
THE ROLLING PROCESS EXPLAINED

EXPIRING FUTURES CONTRACT

The investors obtains $ 30 for the **expiring contract**.

\+ **$ 30**

– **1 FUTURE**

ROLL OVER

NEXT DUE DATE FUTURES CONTRACT

For $ 30 the investor obtains only 0.90 of the contract with the next due date as it is priced at $ 33.

\+ **0.90 FUTURE**

– **$ 30**

…the contract is rolled over prior to the expiration date to avoid physical delivery of oil.

…the contract with the next due date is purchased. In case this contract is more expensive than the one that expires, the investor gets "less"of the contract. The subscription ratio decreases.

ROLL OVER
BASICS

Summary:

As is the case with all oil investment instruments, participation certificates always refer to the futures market. In order to prevent physical delivery of oil, futures are rolled over on a **monthly** basis prior to maturity into futures contracts with a longer term.

To prevent a leap in the price of the certificate through the roll over, the subscription ratio is adjusted. The subscription ratio indicates the amount of futures the certificate relates to. It changes with the roll over into the next future.

$$\text{new subscription ratio: } \frac{\text{price expiring future}}{\text{price next future}} \text{ x old subscription ratio}$$

On the following page you will find a fictive example showing the price development of a certificate on the crude oil future (Brent) near the rolling date. The Bloomberg closing prices of the crude oil futures as well as of EUR/USD at the respective days are used for the calculation. The rolling from May contract into June contract is in the example based on the closing price of March 03, 2020.

THE FUTURE MARKET
EXAMPLE ROLL OVER AND ADJUSTMENT OF SUBSCRIPTION RATIO

Date	Underlying	Front-Month Future	Subscription ratio	EUR/USD exchange rate	Theoretical value
March 18, 2020	May 20	USD 24.88	1	1.0915	EUR 22.79
March 19, 2020	May 20	USD 28.47	1	1.0692	EUR 26.63*

Brent Crude Oil	Name	Expiry	Close Date	Closing price
Expiring future	Brent Crude **May 2020**	March 31, 2020	March 19, 2020	USD 28.47
Next future	Brent Crude **June 2020**	April 30, 2020	March 19, 2020	USD 30.30
			Quotient	**0.939604**
			(May Future / June Future)	

March 19, 2020	June 20	USD 30.30	0.939604	1.0692	EUR 26.63*
March 20, 2020	June 20	USD 29.00	0.939604	1.0688	EUR 25.49
March 23, 2020	June 20	USD 29.29	0.939604	1.0726	EUR 25.66

$$\text{new subscription ratio} \quad \frac{\text{price expiring future}}{\text{price next future}} \quad \text{x old subscription rate}$$

$$0.939604 = \frac{28.47}{30.30} \text{ x } 1 \text{ (old subscription rate)}$$

* The roll over has NO impact on the value of the certificate!

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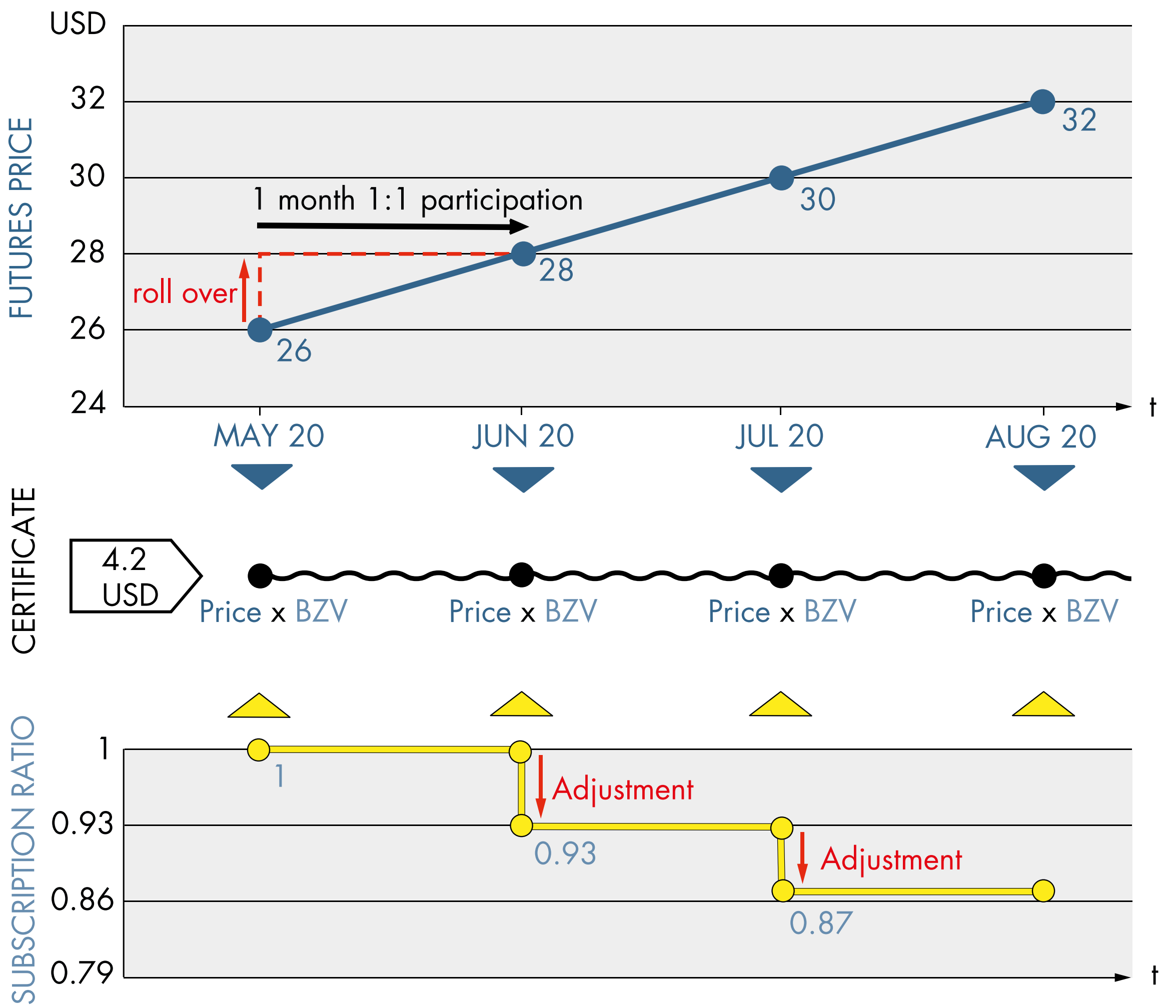
ROLL OVER
FUTURE CURVE & SUBSCRIPTION RATIO AT THE DATE OF ROLL OVER



Between the roll overs investors **participate 1:1** in the future with the shortest tenor to maturity. In case the future moves sideways between the roll overs, the certificate **will not post an increase**.

The certificate will not record a price change as the increase is cushioned by an **adjustment of the subscription ratio**. Thus, the investor will neither generate profit nor loss.

ROLL OVER IN PRACTICE
CONCLUSION

Raiffeisen Centrobank rolls over futures contracts serving as underlyings for oil certificates usually **one week prior to expiry** of the future with the shortest maturity into the future with the next expiry date.

This evades possible market disruptions at the expiry date.

In practice, investors can only make a profit with a certificate based on futures if the oil price rises even more strongly in a contango situation (or decreases more slowly in the case of backwardation) than the prices on the commodity futures market and thus the estimation of active investors there would suggest.

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