The potential for utilising forward contracts for fish stock

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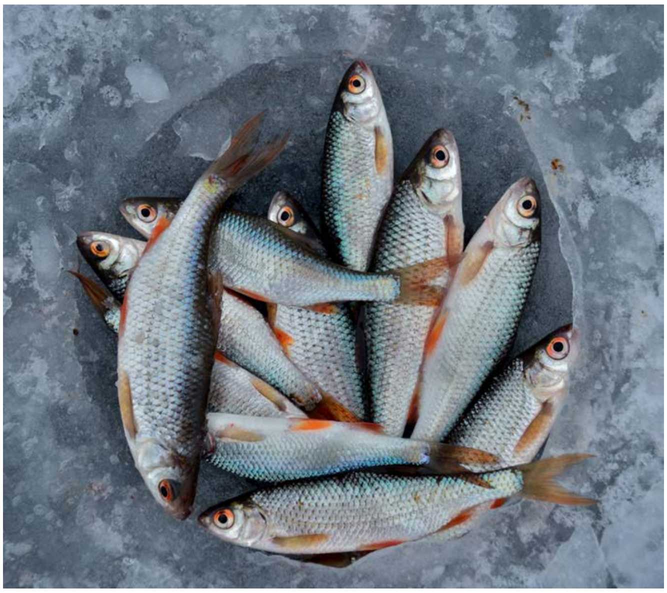
In an uncertain world, forward contracts provide a potential hedge against future uncertainty – including for fishers. But with future fish stocks an uncertainty in and of itself (due to overfishing and climate change) can forward contracts work for the fishing industry?

In the past, the world appeared far more certain; there were fewer disruptions caused by factors of uncertainty such as climate change and political unrest. Nevertheless, the South African legal system makes provision for contractual parties to alter the risk caused by climate change, for example, by buying tuna fish, grain, mealies and the like in the present and receiving them at a fixed future date. This is what is known as a forward contract. Since climate change is part of future uncertainty, we do not know how it will affect the production of these commodities in the future. However, in South Africa, buyers and sellers can reduce this risk by concluding a forward contract – agreed upon by at least two parties. In a conventional contract of sale, one party buys an object in exchange for money, for example an apple for R10. The characteristics or essentials of a contract of sale are simply the object to be exchanged for a certain fixed amount of money. On the other hand, it is possible to buy an apple at a fixed future date today for R10 in a forward contract. Once again, the characteristics are an object and a fixed amount of money, the only difference being the delivery of the apple takes place at a fixed future date, for example 10 June 2027. This date, 10 June 2027, presents a future uncertainty – as to whether the seller will be able to deliver or hand over the apple to the buyer on that date. Owing to this future uncertainty, this contract of sale is referred to as a forward contract.

A forward contract, commonly known as a future contract on the Johannesburg Stock Exchange (JSE), is an example of how buyers and sellers are buying and selling future hope – hope that the apple, in our example above, will be in existence on 10 June 2027. Instead of selling a single apple, it is also possible to sell an entire crop of apples or mealies at a fixed future date. Generally, buyers of fish, tuna, or produce (apples or mealies, etc.) will agree with a fisher or farmer to buy 1 000 kilograms of tuna, mealies, or apples at a specific future date, for example 10 June 2027, for a fixed amount of money, for example R2 800.



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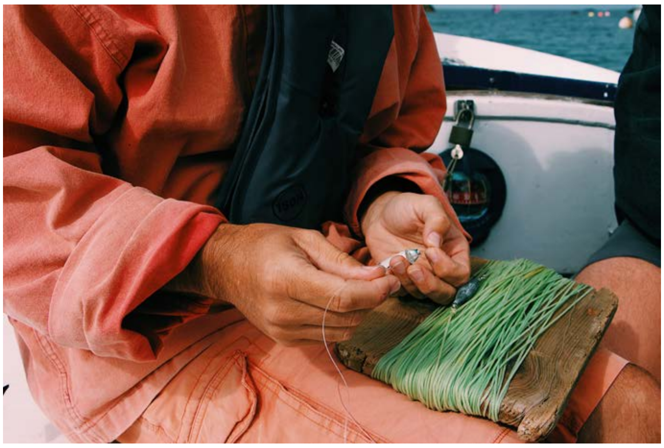

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Increased risk, potential higher reward

In contrast to a contract of sale, certain financial risks are relevant to a forward contract – for instance between a farmer and a buyer. Since the world is experiencing the consequences of climate change, the result of high carbon emissions over the past 100 years, it is no longer certain that a farmer will be able to deliver 1 000 kg mealies at a fixed future date. Therefore, the following consequence may be a reality: The buyer pays R2 800 for a future crop of mealies, but on 10 June 2027 there is no harvest. Subsequently, the farmer informs the buyer that there are no mealies owing to drought caused by severe climate change. In such a case, do you think the farmer should pay back the R2 800? The answer is no; owing to the forward contract, the seller is obliged to take the risk of the possibility of receiving no mealies in the future as a result of drought. In this case, the forward contract benefited the farmer – the farmer received R2 800 in the present but is unable to deliver a crop of mealies on 10 June 2027. We can therefore say that the farmer made a profit of R2 800 and the buyer of the mealies a loss of R2 800.

On the other hand, a seller may also conclude a forward contract with a farmer to buy all their mealies on 10 June 2027 for R5 000. The farmer is now in a difficult position; the possibility exists that no mealies will be delivered as

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a result of a future drought (climate change) or that the farmer could deliver twice as many mealies (2 000 kg) since the parties agreed that the buyer would buy the entire crop of mealies at a future date. If the seller pays R5 000 for all the mealies, and the farmer delivers 5 000 kg of mealies, then we simply say that the buyer made a profit at the farmer's expense, as the value of 1000 kg of mealies would be R2 800 and therefore the value of 5 000 kg of mealies would be R14 000 (R2 800 x 5). The farmer received R5 000 in the present, but on 10 June 2027, the farmer could have earned R14 000, but agreed to sell all the mealies for R5 000 only. Therefore, the loss suffered by the farmer is R9 000 (R14 000 - R5 000), while the buyer of the mealies made a huge profit, as they paid R5 000 for 5 000 kg of mealies.

Fishing forward

This unique consequence of a forward contract is also, in principle, relevant to fishers who sell tuna on such contracts. Although a forward contract is an accepted legal contract to include or exclude risk for the buyer or the seller, it could also effectively alter the risk associated with climate change – it could either benefit the farmer or the buyer.

To a certain extent, the buyer is bearing all the risk, and to this end an experienced buyer tries to balance the probabilities of receiving a future crop against the best possible price agreed to in the present. If the probabilities of a future crop or harvest (a bumper crop) are slim, then the buyer will generally try to pay less for future crops and a farmer would be most likely to accept the reduced price. The same consequence is relevant to the JSE where buyers are buying future contracts relevant to mealies, for example. Future contracts are more regulated than forward contracts and consequently the JSE has strict rules regulating the former. In addition, the consequences explained above are equally relevant to buyers of both types of contract.

In short then, forward contracts on fish stock are definitely possible, but due to climate change and other uncertainties, they come at a risk to both buyer and seller.

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