<u>Why go short?/What is going short?</u>

Going short entails borrowing (buying) a security you don't own to be sold either at the purchase price or lower than its current market price (this is to attract a buyer to buy it at a cheaper price), with your expectation of buying it way cheaper in the market, then returning (selling) it to whoever lent you the security in the first place. On rare occasions, the borrower might be initially able to sell the bond at a higher price (because prices rose), securing a profit early after the repurchase or repo agreement commenced.

<u>Stages of going short</u>

1. **Borrowing the bond/Repo**: this involves the borrower giving cash to the owner of the bond (buying), who has agreed to lend you the bond on an agreed start date, at a specific price, and intends buying it back from the borrower on the agreed end date, but cheaper than where it was initially lent.

<u>Why does the lender want to buy it back cheaper?</u>

Remember you were able to sell the borrowed security at the purchase price or cheaper than the current market price to attract a buyer? If you remember, it's the same logic behind the security lender wanting to buy it back cheaper from you. The lender makes profit buying it back cheaper.

For example, the lender lent you the security at a price of N94.50 on the 5-Feb-24 (start date) and intends to buy it back from you at N94.25 on 12-Feb-24 (end date). Here, the lender quoted you ***94.50 5-Feb/94.25 12-Feb*** – which means "you will have to borrow (buy) the security at 94.50 on 5-Feb and return (sell) it back on the 12-Feb at 94.25. The lender makes a 25 kobo (94.50 minus 94.25) spread from transacting with you in (a repurchase or repo agreement).

<u>Why can't I just sell the bond back to the lender on the end date?/Why do I have to sell at the purchase price or at a cheaper price?</u>

Imagine borrowing (buying) the security at N94.50 on 5-Feb and holding on to it till the 12-Feb, only to return (sell) it back at N94.25? This is equal to making a 25 kobo loss while the lender makes a 25 kobo gain, as conventional buying and selling requires buying at a cheaper price and selling at a higher price or selling at a high price and buying back cheaper.

In repo agreements, making an initial loss isn't unconventional, as the gain from bond price falling low presents a net income balance scenario for the borrower (where the initial loss is cushioned by gain from the borrower buying the bond back at a lower price and selling higher to the lender).

However, the only opportunity of making profit as a borrower is to sell/dispose the security borrowed, either at the purchase price of 94.50 or a cheaper one of 94.20 (this will be a very attractive price to any buyer in the market). This leads to the second stage of going short.

2. **Selling the bond**: this involves the borrower receiving cash from selling the borrowed security at either the purchase price or cheaper, just to attract a buyer. This can be done immediately after the purchase (borrowing) to moderate the loss of bond's price falling daily in the market.

3. **Buying the bond back**: following how the bond's price has begun falling, which is the ultimate reason for going short in the first place. The borrower buys (gives cash to a seller) the bond back from the market, as the return date approaches. Although what you buy becomes yours, the borrower is however bound to the repo agreement and has to return the bond to the lender. Here, the borrower has for example successfully bought the bond back at N90.25. Meaning the bond's price has reasonably fallen, as expected.

4. **Returning the bond/Reverse Repo**: with the borrower comfortably buying the bond back at N90.25, the security is returned (sold) to the lender at N94.25. With a N4.00 gain from the bond price falling (94.25 minus 90.25). The gain from the reverse repo is netted against the initial loss, thereby putting the borrower in the money.

What happens if the bond price falls and then reverses?/What happens to the borrower if the bond price doesn't fall after entering into the repo agreement?

A borrower who knows how volatile the market can be, will protect himself against making an initial loss (stage 2) and a subsequent one (stage 4), by buying the same bond at 94.50 (hoping to sell it higher for profit) from another seller in the market in case prices rise. This is called ***Hedging***.

Hedging is a neutral transaction initiated by the borrower with similar parameters as the initial transaction being hedged against. So, since the borrower went short, going long will be a hedge and if the borrower goes long (the borrower borrows cash, not a bond this time to go long), going short will be a hedge.

A long hedge will only be profitable if the borrower's going short expectations is not being met. That is, if prices rise instead of falling. For example, on 5-Feb, the borrow buys the same bond at N94.50, but not under a repo agreement this time, either with personal or borrowed cash (with no obligation to return the bond to the seller); holding the bond as prices rise against the expectations them falling (the essence of repo agreement). This presents an opportunity for the borrower to sell the bond at a hypothetical price of N95.50, being a N1 gain (95.50 minus 94.50) from hedging.

Whenever a hedge is taken, the market must be keenly observed, to close the hedge immediately by selling off the long hedge if prices start falling and a short hedge if prices start rising. Meaning that, no need for the hedge anymore (since the hedge is to protect from incurring substantial losses).

What if the there's no need to borrow the security?

Indeed, there will be no need to borrow a security if the trader, who is a borrower under a repo agreement, has the bond readily available. This kind of transaction will entail only two legs:

1. **Sell the bond**: the trader sells the bond to a buyer (receives cash), knowing prices are going to fall and may or may not hedge against prices rising.

2. **Buying back the bond**: the trader then buys the same bond back (pays cash) from the market at a cheaper price, making profit and may or may not hedge against prices rising.

In this transaction the trader has for example, sold the bond at N94.50 and buys it at N90.50, making a N4.00 gain. The cash amount paid from buying cheaper is lower than the amount from selling the instrument, in the case of going short and the cash amount received from selling higher is more than that from buying cheaper in the case of going long.

Note that, there is an inverse relationship between prices and yields. So, a bond sale at N94.50, with a hypothetical yield of 16%, will have the trader buying back at a hypothetical yield of 16.50% for a price of N90.50.