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Arbitrage Funds

Getting Smarter Series

Arbitrage

In this month's series, we'll try to understand concept of arbitrage and arbitrage mutual funds.

Simply put, an arbitrage transaction seeks to generate risk-free (close to risk-free) profits, done by parallel buying and selling of a security in two different markets or exchange.

It is risk-free as it does not bet on direction of any security, loosely termed non-directional/Hedged positions.

Arbitrage opportunities are found in temporary mispricing of security arising due to various corporate actions, same security with different price on different exchange, discount/premium in futures of underlying security etc. It is a practice that takes advantage of market inefficiency

Next we move to understand a few of the most common arbitrage opportunities

Arbitrage Opportunities

Exchange Arbitrage

- If a stock is priced at Rs. 100 in NSE and Rs. 101 in BSE, one can sell on BSE and buy on NSE thereby locking in profit of Rs. 1.
- One will unwind this trade when the stock is priced efficiently i.e. same one both exchanges.

Cash Future

- Futures are normally priced premium to spot (explained next)
- Hence one can sell future and buy stock till the prices converge which is every month on expiry.

Index and ETF

- When ETFs (i.e. Basket of securities) of underlying Index is available in lower price than the Index, arbitrageurs will buy ETF till the price efficiency is achieved.

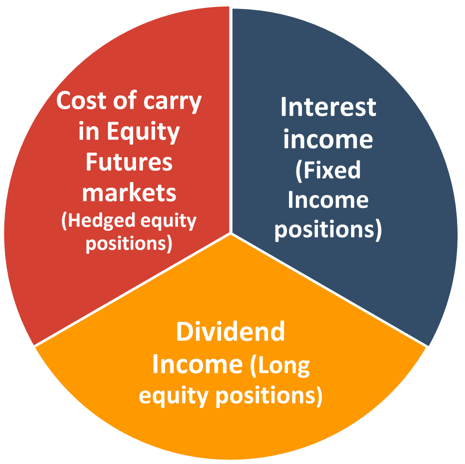
Corporate Actions

- Arbitrage opportunities arise
- If the announced dividends are higher/lower than expected dividends by market participants
- During Merger & Acquisition using Swap ratio
- Mispricing during Buy-back announcement

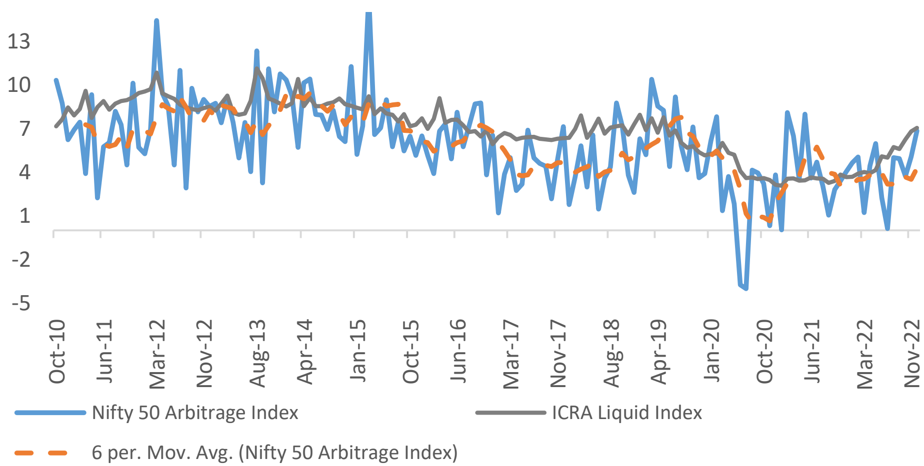
Arbitrage Mutual Funds

- Arbitrage Mutual Funds need to maintain a minimum of 65% of equity and equity related instruments. Rest can be parked into Debt and cash equivalents mainly to earn interest income and also required as margin and managing liquidity.
- Within arbitrage, most widely practiced is plain vanilla cash future positions in different stocks. Apart from these, Fund Manager (FM) do exploit opportunities using different strategies as and when available.
- When the spreads (explained in next slide) are low or even negative for some period, FMs park money in debt, mostly in shorter-end to earn interest income, avoid duration risk to be able to capture arbitrage opportunities as they arise. The taxation status is considered based on average of closing and opening arbitrage equity exposure over a 12-month period and hence would not affect if debt exposure is higher for a few months until spreads rise again.
- Investors looking for low risk and debt-like returns can consider this category with an additional benefit of tax treatment like equity.

Source of Returns



Monthly Arbitrage returns



1. Returns closer to shorter-end debt funds.
2. Monthly returns can volatile, hence slightly longer holding period can smoothen return profile. (6 month average return)
3. Except in March-20, no negative returns.

How are futures calculated and factors affecting the spread

Theoretically,

Future price = Spot price + Cost of Carry

Where, Cost of Carry (CoC) = (1 + Risk-free rate – dividend)

Factors affecting CoC also called as **spread** are explained below:

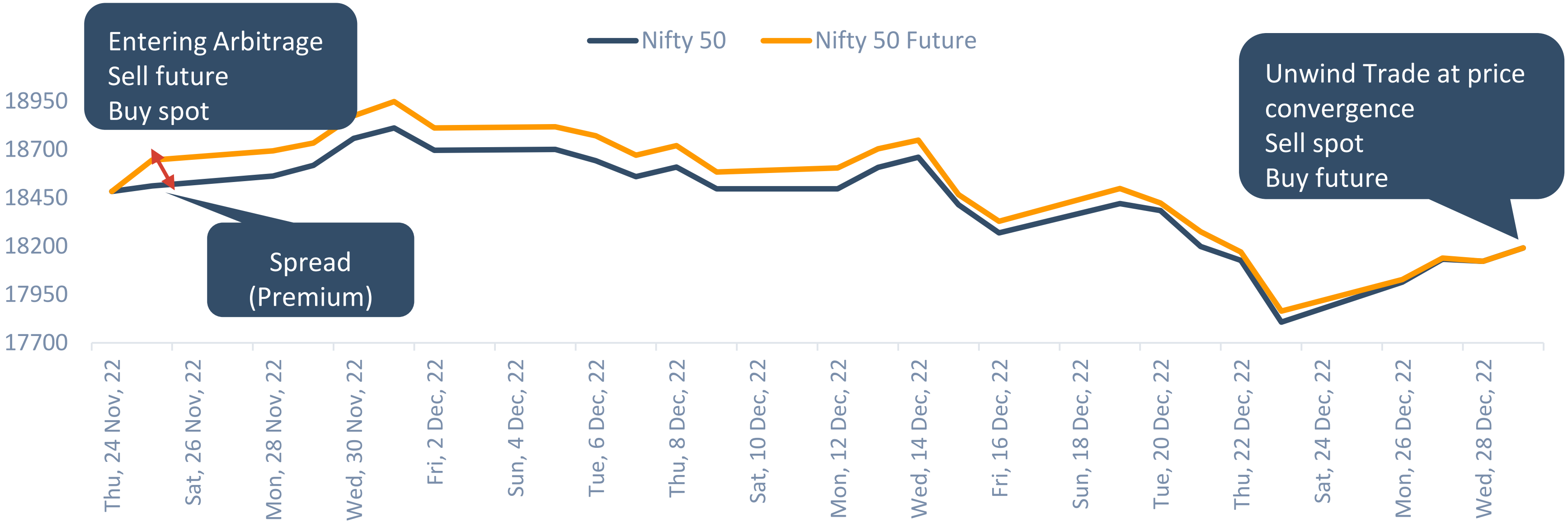
- Risk-free rate: When we buy stock in Cash market we pay for the stock immediately. When we buy a future, we don't pay anything until the futures contract matures. Thus, the seller is effectively funding the buyer and needs to be compensated which is generally close to risk-free rates.

- As futures are not entitled to dividends unlike stocks, the same usually trade at discount when dividends are announced. It re-adjusts once dividend has been paid.

- In reality, apart from risk-free rate, market factors like supply demand in that particular security, liquidity, market momentum, market flows etc. can also affect spread.

- Premium is when Future Price > Spot Price and Discount is vice versa.

Visual representation of Future and Spot Price



What is a rollover?

In an arbitrage transaction, one way to book profits is to reverse the arbitrage transaction i.e. buy back the futures and sell the cash position, so the profit can be realized.

However, the above strategy can entail higher costs and higher tax implications if one wants to again enter into arbitrage position in the same stock. **On expiry or before that, the cash equity position is held on while the futures position is rolled over to the next month i.e. selling futures of next month's series**. The rollover premium becomes the monthly income for the fund and entire funds locked in the arbitrage are released when the total arbitrage position is liquidated.

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