

## DR Advisor Insights

### ADR Arbitrage and Program Balances

#### Introduction

Ever since J.P. Morgan created the first American Depositary Receipt (ADR) in 1927, arbitrage trading has played a role in the ADR market. It is commonly known that ADRs and their underlying shares trade independently; although they are fully fungible with each other, their relative prices are not at all times the same. Hedge funds and trading firms attempt to capitalize on this asymmetry, generating revenue from periodic, short-term, FX-adjusted price differences between a company's ADR and its underlying, local security.

Traders that use arbitrage strategies can utilize the issuance or cancellation of ADRs, resulting in periodic changes in the number of ADRs outstanding, also known as the ADR program's balance. Occasionally, an ADR program's balance can change significantly from this activity. This fluctuation causes some companies to perceive arbitrage activity as a threat to the overall health and stability of their ADR program.

However, the firms engaging in ADR arbitrage are merely reacting to price differences. They do not create the difference in price between the ADR and the underlying security; they simply capitalize on it with short-term trading strategies. Moreover, arbitrage activity can actually facilitate trading liquidity in both the US and local market.

#### The causes of price asymmetry

The difference in price between the ADR and the underlying share is normally referred to as the ADR premium or discount. Substantial premiums or discounts can arise for a variety of reasons but are primarily due to one or more large institutional buyer(s) or seller(s); currency fluctuations can also influence the relative value of each security.

When there is heightened buy/sell demand in one market over the other, the relative

premium/discount temporarily widens. If this price difference widens enough, arbitrage firms will capitalize on it.

When viewed in this context, the issuance or cancellation of ADRs for arbitrage purposes is a direct result of changing demand conditions in either the US or local stock market. Understanding how and when traders engage in arbitrage can be helpful with regard to knowing that large buyers or

#### A brief overview of ADRs

An ADR is a US dollar-denominated share of a non-US company. Each ADR represents one or several underlying shares from that company's local stock market. An underlying share (also known as an ordinary share, or ORD) and an ADR are fully fungible with one another. Each can be openly exchanged for the other by a variety of means: through a depositary bank (using the issuance and cancellation process), via the crossbook market that is made up of broker-dealers, or through other non-market mechanisms (e.g. securities lending).

#### The nature of ADR issuance and cancellation

Depositary banks are a primary conduit for facilitating the exchange of ADRs and ORDs across international borders. When a broker-dealer, acting on behalf of an institutional investor, brings ORDs to a depositary bank and wishes to exchange them for ADRs, the depositary "issues" ADRs to that broker-dealer. Likewise, if a broker-dealer has ADRs and wants ORDs, the depositary "cancels" the ADRs.

In this respect, issuances grow ADR outstanding balances, while cancellations shrink them.

sellers are active in a company's ADRs or local shares.

## Arbitrage via issuance or cancellation

In instances where the arbitrageur issues or cancels ADRs, the firm works within both equity markets and with a depository bank.

The first step in the arbitrage trade is to identify which trades can be profitable (see Diagram; step 1). In this example, the ADR is trading at a price premium relative to its local share (also called an ORD, or ordinary share). The premium could be a result of a large institutional buyer of ADRs via a US stock exchange, increasing the relative price of the ADR temporarily.

Since the ADR is trading at a premium, the firm executing the arbitrage trade will borrow the ADR and sell it short in the US (step 2). Simultaneously, the firm will purchase the ORD on the local stock exchange (step 3) at a relatively lower price.

The firm will then contact the depository bank and "issue" ADRs (3c per share in this example; step 4).

Once the firm exchanges the ORDs for ADRs it can return to the lender the ADRs it had borrowed (step 5), and close out its position. The net effect of the transaction for the firm engaged in this arbitrage is a flat position and a profit of 3c per ORD (minus the cost to borrow the ADRs).

## Arbitrage's effect on ADR balances

In the example above, the presence of a large institutional buyer in the US resulted in the ADR temporarily trading 6c above the price of its underlying share. The hypothetical

## Example of Potential Arbitrage Process

### Assumptions:

ADR Price: \$10.06 (ADR at a premium)

ORD Price (in USD): \$10.00

Depository Fee to Issue: 3c per ADR

Step	Action	Result
1.	Identify Opportunity	
2.	Borrow ADR and sell it short for \$10.06	ADR borrowed and sold for \$10.06
3.	Buy ORD for \$10.00 (implied FX rate included)	$\$10.06 - \$10.00 = \$0.06$ and one ORD
4.	Exchange ORD for ADR at Depository and pay 3c per ADR	$\$0.06 - \$0.03 = \$0.03$ and one ADR
5.	Return borrowed ADR and close position	Return ADR to Lender and profit 3c

firm engaged in arbitrage to capitalize on this price difference, a process that resulted in the issuance of ADRs and, therefore, an increase in the number of ADRs outstanding.

Additionally, by acting as a seller of the ADR and a buyer of the ORD, the arbitrageur also increased trading liquidity in both the ADR and ORD markets.

When the ADR is trading at a discount relative to the price of the ORD, the reverse process occurs. In other words, ADRs would be cancelled and a company's balance of ADRs would fall.

Regardless of whether the ADR is trading at a premium or a discount, the price differences are always temporary, which is one of the factors that can cause the brief - although sometimes prolonged - upward and downward fluctuations in ADR balances. During certain periods, arbitrage firms can account for the bulk of these changes, although this is infrequent.

## Conclusion

Arbitrage trading takes place every day in the ADR market and occurs as a result of the difference in price between the ADR and the ORD.

Arbitrage firms do not create or exacerbate these price differences; they merely react to and ultimately realign them as a result of their trading activity.

While trading by firms engaged in arbitrage can affect ADR balances, their behavior is normally a result of elevated buy or sell demand in either the ADR and/or ORD market. In addition to being generally beneficial with regard to trading liquidity, heightened arbitrage activity can indicate shifts in institutional demand and changes in market sentiment.

For market information on DRs, go to J.P. Morgan's website: [adr.com](http://adr.com)

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