

SINGLE STOCK **FUTURES**

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INTRODUCTION

Single stock futures are standardized futures contracts on the stocks of individual companies. The new single stock futures on Wiener Börse rounds off the exchange's existing product portfolio and opens up additional opportunities for private as well as institutional investors to optimize their stock portfolios by giving them new trading options based on a simple and efficient alternative to trading in the underlying stock:

- > Single stock futures constitute a simple and efficient mechanism that makes it possible to flexibly increase or decrease positions in a certain stocks.
- > Investors can benefit from an expected decline in the price of a stock.
- > Single stock futures allow efficient trading with leverage, since the full value of the stock does not have to be paid at the time the trade is concluded.
- > Costs can be minimized, as single stock futures are exclusively settled in cash and there are no costs of stock transactions.
- > Investors can quickly shift their investments from one stock to another without incurring costs resulting from stock transactions.

GENERAL REMARKS

Single stock futures are a type of forward transaction - like futures in general – that are standardized as regards contract value and maturity. A forward transaction obliges two counterparties to fulfill an agreement at a specified future point in time. The standardization facilitates the liquidity of exchange trading in futures.

Long futures and short futures are the two basic positions in futures trading:

Long Futures	Short Futures
Obligation to buy the underlying at the closing price on delivery day	Obligation to buy the underlying at the closing price on delivery day

An agreement on a future purchase may be revoked at any time by entering into an opposite agreement on a sale at the same time, thus any loss or profit may be realized even before the expiration date (closing out of positions).

FULFILLMENT OF FUTURES TRANSACTIONS

An investor who has built up positions (long or short) in single stock futures, has several possibilities to close out this position:

> Fulfillment of futures contracts on the expiration date

The investor waits until maturity to fulfill his/her buy or sell obligation.

> Closing out of futures

The investor may revoke the agreement on the future purchase (long futures) or sale (short futures) at any time during the life of the futures by entering into an opposite contract, i.e., the sale of the original long position and the purchase of the original short position. The resulting profit or loss is settled in cash. This means that the price difference between the price of the futures at which the original trade was concluded and the price at which the opposite transaction was entered into is expressed in money terms and settled accordingly. Thus, the profit or loss may be realized even before the expiration date. This is called closing out a position.

CASH SETTLEMENT

In contrast to physical delivery like in the case of stock options on Wiener Börse, single stock futures are settled in cash (cash settlement). The difference between the price of the futures at which the trade was concluded and the final settlement price of the futures at the end of its life is expressed in money terms and settled accordingly. If the futures contract is closed out prematurely, the buy and sell prices of the futures form the basis for the cash settlement.

COLLATERAL (MARGIN)

In contrast to purchasing a stock for which the full purchase price has to be paid by the buyer at the time the trade is concluded, no capital is invested when futures contracts are concluded, but rather an agreement is entered into which secures the profit if market expectations are met, but which may also result in a loss. Wiener Börse as the central clearing house is liable for the fulfillment of the agreements. Therefore, Wiener Börse requires collateral (margin) to be deposited for each futures position, which is repaid when a transaction is finally settled. The amount of the collateral required is determined taking into account the historic volatility of the underlying stock.

VALUATION

The purchase of single stock futures is equal to an agreement on the purchase of stocks at a later time, with the price being determined at the time of trading. The main difference is that single stock futures are settled in cash and thus stocks are not traded. The sale of single stock futures, in turn, is comparable to the agreement to sell stocks at a later point in time, with the seller not having to own stocks to be able to conclude this contract.

The futures price depends on the price of the underlying stock, but the futures price and the stock price usually vary. To determine the fair value of a futures contract, the purchase of a futures has to be compared with the direct purchase of a stock. The costs and returns incurred in connection with the purchase of stocks and holding these until a futures contract expires, are made up of three factors:

- > The stock price (multiplied by the number of stocks purchased)
- > Lost interest income of an alternative investment
- > Dividends which are distributed until maturity of the futures

As the purchase price of a futures does not have to be paid (only collateral has to be deposited) at the time the trade is concluded and the buyer of a futures is not entitled to any dividends on the underlying stock, the theoretical value of the futures can be illustrated as follows:

Fair futures price = current stock price + interest costs (until maturity) – distributed dividends (until maturity)

In practice, market participants have different expectations as regards interest rates and future dividends – this usually results in different market opinions on the fair price of futures.

SELECTED APPLICATION OPTIONS

CREATING A SYNTHETIC STOCK POSITION

By purchasing single stock futures (long position) the investor can achieve the same risk profile as by purchasing the underlying stock.

An Example for Long Futures

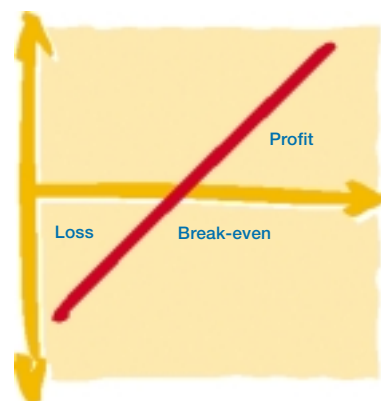
An investor expects the stock price to increase in the next few weeks. At the time, the price of the stock is EUR 49.5. Thus, the investor buys futures at the current forward rate of EUR 50.4. This forward rate (its closing price) does not have to be paid today, but on the future expiration date. If the price of a stock is, for example, EUR 55 on the expiration date, the investor receives a profit of EUR 55 – EUR 50.4 = EUR 4.6 per futures contract. This profit has to be paid out by the person who sold the futures contract at EUR 50.4.

In the event that the investor's expectations are not met and the stock price declines to EUR 48, the investor must realize a loss of EUR 48 – EUR 50.4 = EUR -2.4 per futures contract. To determine the total profit or total loss of the futures position, the profit or loss per futures contract has to be multiplied by the contract value. At a contract value of 100 stocks per futures contract, the purchase of a futures contract results in a total profit or loss of the position EUR 460 or –EUR 240.

If the expectation of increasing prices is met already before the expiration date, the investor can realize the profit by closing out the futures (entering into an opposite transaction) at the currently higher forward rate.

Vice versa, the investor can limit the loss by closing out positions in time in the event of expected losses and if he or she does not expect a trend reversal before the delivery day.

The following figure presents the results in the form of tables and figures. The stock price is shown on the horizontal axis. Profits and losses at the respective stock prices are indicated on the vertical axis.



	Futures contracts	Total position
Purchase price	EUR 50.4	- EUR 5,040
Price on the expiration date or when closing out the position	EUR 55	+ EUR 5,500
Profit from the long position	EUR 4.6	EUR 460

RETURNS AT DECLINING STOCK PRICES

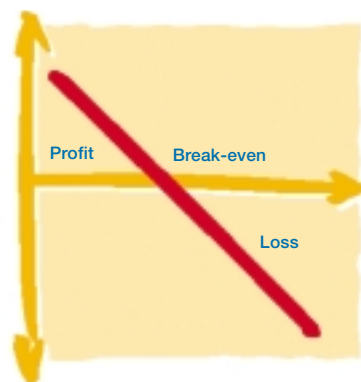
Investors may profit from an expected decline in the stock price by selling futures contracts (short position). The investor does not have to own the underlying stock to be able to sell it.

An example for Short Futures

The investor expects that the stock price will decline in the next few weeks. At the time, the price of the stock is EUR 22.5. Thus, the investor sells futures at the current forward rate of EUR 22.2. The investor does not receive this forward rate (the closing price) today, but on the future expiration date. When the price of a stock is, for example, EUR 20, the investor receives a profit of EUR 22.2 – EUR 20 = EUR 2.2 per futures contract. This profit has to be paid out by the person who bought the futures at EUR 22.2.

In the event the investor's expectations are not met and the stock price increases to EUR 24, the investor will have to realize a loss of EUR 22.2 – EUR 24 = EUR -1.8 per futures contract. To determine the total profit or total loss of the futures position, the profit or loss per futures contract has to be multiplied by the contract value. At a contract value of 100 stocks per futures contract the purchase of a futures contract results in a total profit or loss of the position EUR 220 or –EUR 180.

The following figure presents these results graphically. The stock price is shown on the horizontal axis. Profits and losses at the respective stock prices are indicated on the vertical axis.



	Futures contracts	Total position
Sell price	EUR 22.2	+ EUR 2,220
Price on the expiration date or when closing out	EUR 20	- EUR 2,000
Profit from the short position	EUR 2.2	EUR 220

HEDGING OF STOCK POSITIONS

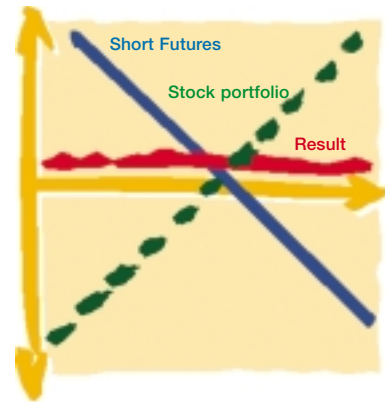
If a (short-term) decline in a stock price is expected, the owner of the stock may sell futures contracts in order to avoid a loss without having to sell the stock itself. The losses on account of the declining stock price are compensated by profits from the short position of the futures.

An exemple for hedging stock positions

The price of a stock is EUR 30.00. An owner of 1,000 stocks expects the stock price to decline. The owner sells futures contracts at a price of EUR 30.2. Since one contract contains 100 stocks, he or she sells 10 futures. One month later, the stock price amounts to EUR 28. The price of the futures is EUR 28.2. The investor closes out the futures position by buying 10 futures contracts at a price of EUR 28.2 per contract. The stock price declined by EUR 2, the futures also by EUR 2.

Thus, the profit from the futures position offsets the loss resulting from the decline in the stock price. The overall portfolio position (stock position and futures position) thus remains unchanged.

The following figure presents these results graphically. The stock price is shown on the horizontal axis. Profits and losses at the respective stock prices are indicated on the vertical axis.



Stock	Per stock	Total position
Stock price at sale of futures	EUR 30	EUR 30,000
Stock price on the expiration date or when closing out the position	EUR 28	EUR 28,000
Loss from stock position	- EUR 2	- EUR 2,000
Futures contracts	Futures contracts	Overall position
Sell price	EUR 30.2	+ EUR 30,200
Price on expiration date or when closing out the position (purchase)	EUR 28.2	- EUR 28,200
Profit from futures position	EUR 2	EUR 2,000
Total position (stocks and futures)	EUR 30,000	
Profit or loss from the total position (stocks and futures)	EUR 0	

YIELD RISES ON ACCOUNT OF THE LEVERAGE EFFECT

The price of a single stock futures changes depending on the price trends of the underlying stock. As both are tradeable at all times during the exchange trading day, any appreciation in value can be realized by closing out the position. The return which can be achieved by holding the stock and the futures contract depends on the amount of the financial means originally invested. When purchasing a stock, the full price has to be paid to the seller. However, if a single stock futures contract is purchased, no money is transferred from the buyer to the seller – instead a margin payment is required as collateral. The amount of the so-called initial margin is determined depending on the historical volatility of the underlying stock. Thus, the financial means originally invested in a futures position amount to a smaller sum than with a stock position. Price changes over a certain period of time reach roughly the same extent regarding stocks and futures. However, a futures position permits profits (or losses) which are based on stocks and are much higher than the amount invested.

An exemple for the Leverage effect

The current price of the stock is EUR 10.00, whereas the price of the futures contract amounts to EUR 10.20. If the stock is purchased, the full amount of EUR 10.00 has to be paid to the seller. When the futures is purchased, collateral has to be deposited with Wiener Börse as the central clearing house. The collateral to be deposited for buying a single stock futures amounts to EUR 204 in this case. Upon maturity, the stock price which is used as a basis for settling the futures contract, amounts to EUR 11.00.

1... Assumption: collateral 20% of the contract value (contract value EUR 1,020)

	Stock	Futures contracts
Buy price	EUR 10	EUR 10.2
Price on expiration date	EUR 11	EUR 11
Profit	EUR 100	EUR 80
Investment	EUR 1,000	EUR 204
Return	10 %	39.2 %

OVERVIEW OF CONTRACT SPECIFICATIONS

Currency	EUR
Contract size	100 stocks
Expiration months	March and September
Number of maturities	one maturity (one month before expiration the next maturity is introduced)
Tick size	EUR 0.01
Last day of trading	third Friday of the expiration month
Settlement day	first exchange trading day after the last trading day
Settlement method	cash settlement
Daily settlement price	last futures price or futures quote taking into account the closing price of the underlying
Final settlement price	closing price of the underlying on the last trading day
Initial margin	depends on the historic volatility of the underlying
Variation margin	Mark-to-market at the daily settlement price
Trading hours	9:00 – 17:30 hrs

OVERVIEW OF TRADEABLE SINGLE STOCK FUTURES

COMPANIES

Austrian Airlines österreichische Luftverkehrs-AG
 Bank Austria Creditanstalt AG
 Bayerische Hypo-und Vereinsbank AG
 Boehler-Uddeholm AG
 Erste Bank der der österreichischen Sparkassen AG
 EVN AG
 Flughafen Wien AG
 Hypo Real Estate Holding AG
 Mayr-Melnhof Karton AG
 OMV AG
 RHI AG
 Telekom Austria AG
 VA Technologie AG
 Verbund (Österreichische Elektrizitätswirtschaft AG)
 Voestalpine AG
 Wienerberger AG
 Wolford AG

SYMBOLS

AUA
 BAC
 HVB
 BUD
 EBS
 EVN
 FLU
 HRX
 MMK
 OMV
 RHI
 TKA
 VAT
 VER
 VOE
 WIE
 WOL

REUTERS

AUAV:<chain>
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 VOE AV <EQUITY> CT
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 VER AV <EQUITY> CT
 WIE AV <EQUITY> CT
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