



# Relax your daytrading

Statistically, in all markets, the highs and lows on a chart do not occur by chance at certain hours of the day. It may therefore be quite wise to limit trading to certain trading hours and time windows. Experience shows this not only leads to more even results but also can significantly contribute to more peace of mind and relaxed trading.

**N**o matter whether one is trading stocks, index futures, currencies, raw materials, commodities or interest rates, this concept holds true. The appearance of daily highs and daily lows is not coincidental. This information may seem unimportant, however it can be used profitably in several ways in both intraday and long-term trading. Limiting trading to certain trading hours leads to a

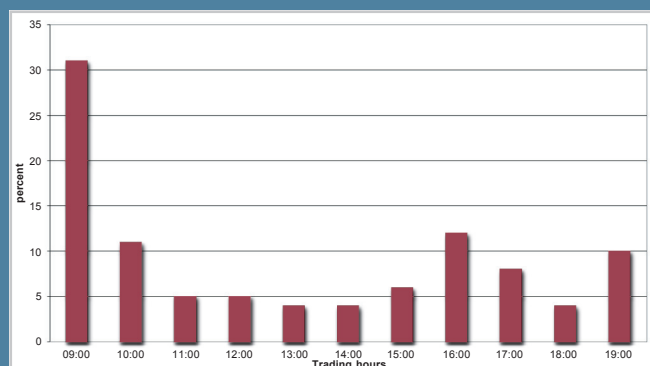
greater percentage of winning trades and a reduction in trading frequency. The result is visibly more even performance development and a working day with much less stress.

### **First hour of trading is key**

Generally speaking, 20% to 40% of all highs and lows occur during the first trading hour in all markets. Another accumulation

## F1) DAX future

Distribution of highs and lows throughout the day in the DAX future.



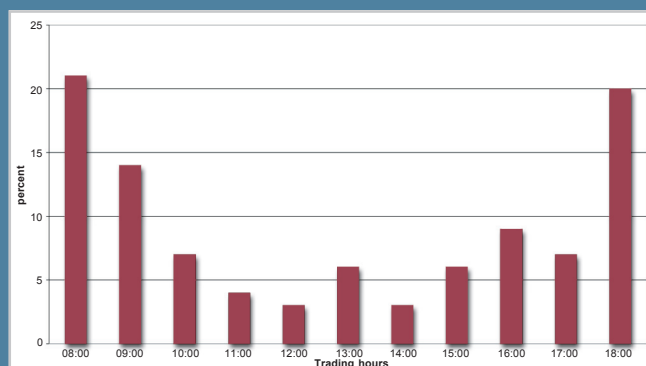
of trades can be observed during the last trading hour. In Europe, there is an additional peak between 16:00 and 17:00 (MET). Generally, daily highs and lows do not occur very often during lunchtime (see figures 1 and 2).

### Why does this occur?

During the first hour of trading, price reacts strongly as it digests new information which occurred while the market was closed. Thus, during the first hour of trading, a direction is initiated which often lasts for the rest of the day. The statistical accumulation of daily extremes during the last trading hour stems from the fact that in a trending market, new highs or lows are achieved until trading closes. The close will usually be very near the respective high or low. In between, an accumulation of daily extremes occurs during the hour between 16:00 and 17:00 (MET). This reflects the reaction of the European markets to the opening of the US markets. This often forces a new direction upon the European markets for the rest of the day. During lunchtime few decisions are made, which results in fewer daily extremes.

## F2) Bund future

Distribution of highs and lows throughout the day in the Bund future.



In that case, the statistical distribution may appear coincidental.

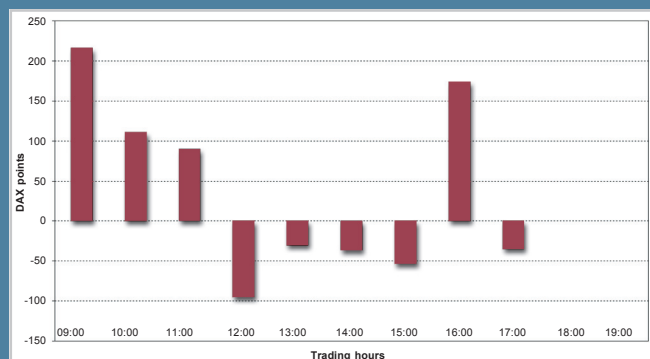
In regard to the bund future, the second trading hour is notable. The reason is the staggered opening hour of the bund versus the Dax, Euro-Stoxx, SMI, CAC, etc. This allows the bund to react, during the second trading hour, to the first hour of European stock action.

### How can we use this information for our trading activities?

We can implement it conscientiously and effectively in our trading strategies. For example, if we are trading certain chart patterns we could just trade those which occur during the first and/or second trading hour. This will obviously result in fewer trades, however these have a much better chance for success. Over the long run, we might achieve a more stable or even better performance than when trading all the signals. We would need fewer trades and still obtain a smoothed performance curve. Figure 3 reveals the results of such a trading system for the Dax future for the past 12 months, whilst figure 4 illustrates the

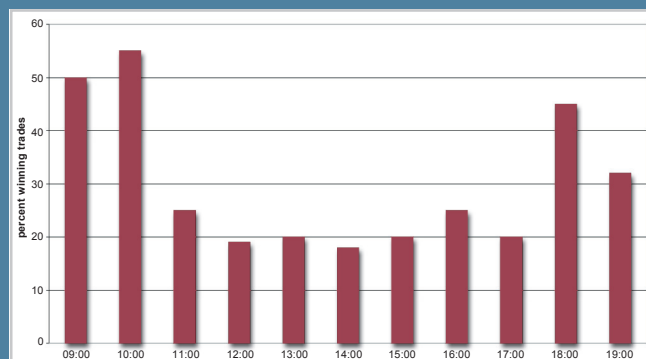
## F3) Trading results

Distribution of the trading results of a trading system throughout a day in the DAX future.



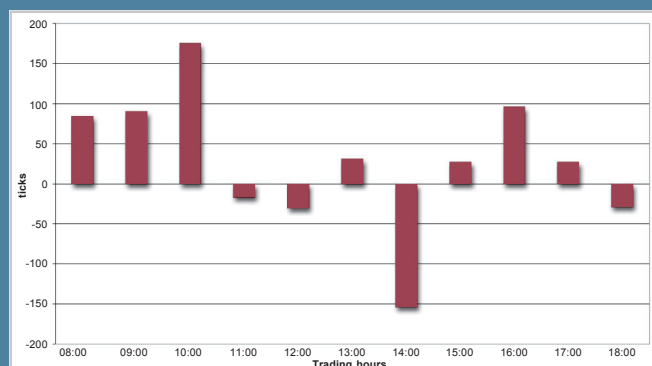
## F4) Winning probability

Distribution of the winning probability of a trading system throughout the day in the DAX future.



## F5) Trading results

Distribution of the trading results of a trading system in the Bund future throughout a day.



### Average trade

It is clearly noticeable that almost the complete performance of the system is based on trades opened between 16:00 and 17:45 (MET). During this time, the results were 12 to 19 points per trade and the profit probabilities were between 39% and 49%. This performance was not obtained during any other trading hour throughout the day.

### Distribution of volume over time

Likewise, volume is not distributed evenly during the trading day. Observing the development of volume on an hourly chart compared to the previous hour, the following results are obtained for the Dax future. On average, the volume, compared to the previous hour, perpetually rises from 9:00 to 10:00 and 14:00 to 17:00 (MET).

During all other trading hours, the volume decreases in comparison to the previous hour. Generally, this holds true for all other markets as well. The largest positions and number of trade signals are seen in the Dax future, during those time windows.

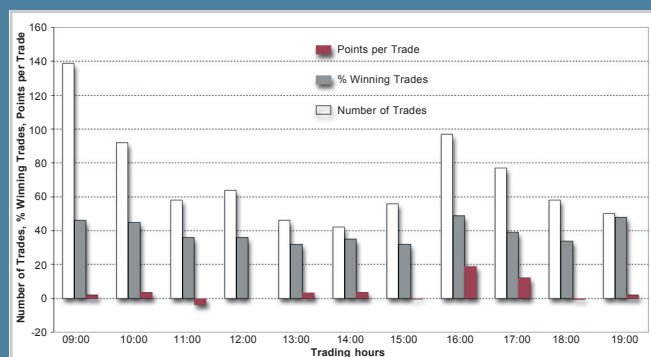
When using trading systems based on larger timeframes, or for larger positions in general, a position should be opened only "market on opening" and/or market at 16:00 (MET). At all other times volume is generally too low to obtain good executions and good performance over a long time period. It is principally a good idea to only trade in markets and during hours when a sufficient amount of large-scale participants are present who can support the just opened trade by squeezing opponents out of their positions. These participants do not trade during lunch hours or early in the evening.

### The bottom line

An effective use of time windows aids in improving the results of systematic trading strategies and contributes to an overall more relaxed day. Therefore, it is always rewarding to look for statistically significant singularities on the time axis in systematic trading methods. This can be helpful from a

## F6) Distribution throughout the day

Distribution of trading frequency, winning probability and average trade of an indicator-based trading system in the DAX future.



psychological point of view as well. However, once a trader has decided not to trade during a specific timeframe, he must not mind missing a big market move. Traders, instead, can focus on the pleasures of enjoying a relaxing lunch break or going jogging, whilst knowing they have a statistical time window edge.

**TRADERS**



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Dr. Alexander Schwarz started trading stocks in 1995. Since 1998 he has specialised in the development of systematic trading strategies for the futures markets. He has consulted on system development for several firms and was the trading advisor at Hornblower Fischer AG in field of managed futures. In addition to his own trading, he advises private investors how to successfully implement trading strategies. He can be reached at [dralexschwarz@gmx.de](mailto:dralexschwarz@gmx.de).