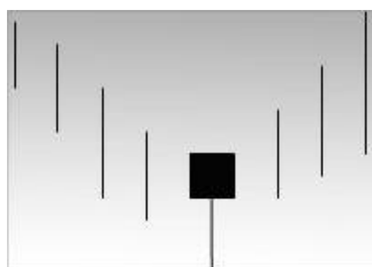
Lecture № 10

Candlesticks Analysis

In this lecture we will get acquainted with one more method of technical analysis called candlestick analysis. We have already considered how the candlesticks are built and what parameters are used for that in one of the previous lectures. Now we shall discuss what possibilities for market forecasts this combinations analysis gives. The thing is that different candlestick combinations can indicate changes in market psychology and trend direction. These combinations are called patterns and, as graphical models, they are divided into reversal patterns and continuation patterns. Let us discuss first the reversal patterns.

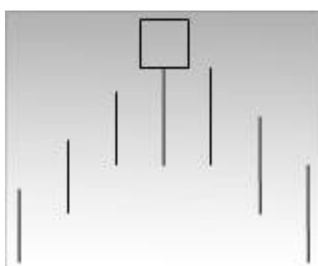
Reversal Patterns - Hammer and Hanging Man

Candlesticks with long lower shadows and short bodies are shown in pictures 1 a-b. Real bodies are placed at the top part of the daily price range. A striking feature of these candlesticks is the fact that they can be bullish or bearish depending on what phase of the trend they appear in. The appearance of the above-mentioned candlesticks in the downtrend is a signal that its domination is over. In this case the candlestick is called "hammer" (see picture 1a).



Picture 1a. Schematic image of a "Hammer" candlestick

If the candlestick presented in picture 1b appears after the price rising, it can be a signal of its possible completion. In this case the candlestick has the ominous name "Hanging man." It really looks like a hanging man with dangling legs.



Picture 1b. Schematic image of a "Hanging Man" candlestick

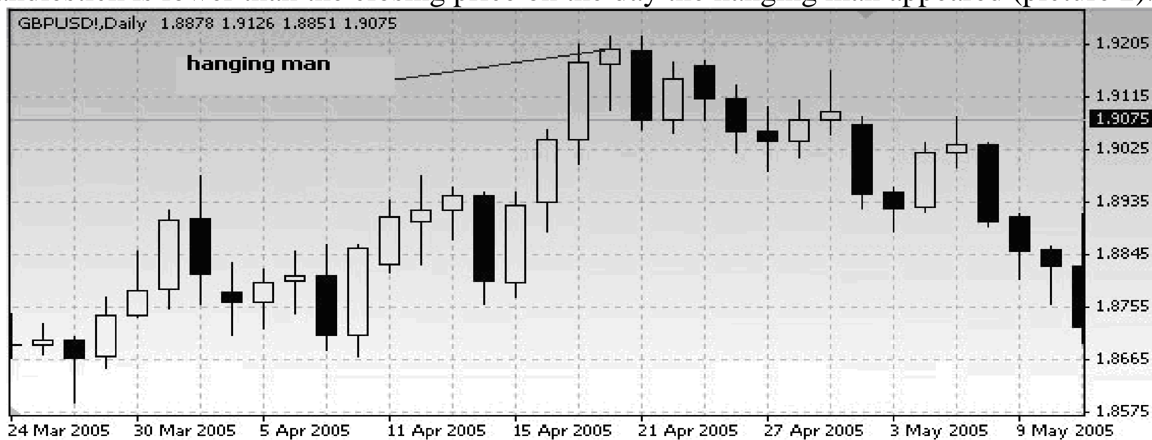
"Hammer" and "Hanging man" patterns can be defined by three main features:

1. The real body is at the top part of the price diapason. The color of the body is not important.

2. The shadow below the body is twice longer than it.
3. The candlestick does not have an upper shadow or it is very short.

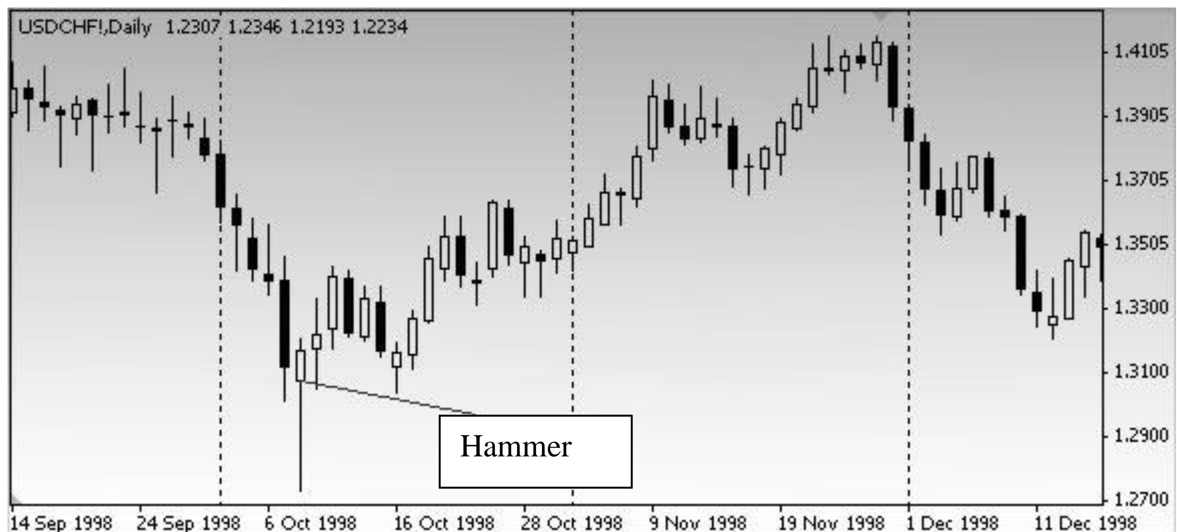
The longer the lower shadow is, the shorter the upper one, and the shorter the body, the higher the potential of a bullish “hammer” or a bearish “hanging man” is. Though the bodies of these candlesticks can be white (empty) or black (filled-in), a hammer with white body has a pronounced bullish character, and a hanging man with a black body has a pronounced bearish character. The white (empty) body of the hammer signifies that prices were steadily falling, then a revival started, and the closing price approximate became equal to the maximum price of the session (picture 3). This indicates an intensification of bullish tendencies. The black (filled-in) body of the “hanging man” dictates that the closing price cannot return to the opening price level. It is a feature of a potential bearish increase. In case a hanging man appears, it is better to wait for the confirming bearish signal.

The logic of these events is the following: the market is full of bullish energy. Then a hanging man appears. On this day trades open at the maximum price level or near it. After this the price sharply falls and then rises again and closes at the maximum price or near it. It is impossible to conclude that the hanging man is a signal of a reversal at the top by this price movement alone. Still, such a considerable price drop during one session indicates that the preliminary conditions for a future reversal exist in the market dynamics. So the main principle which you should remember in case you encounter a hanging man is that the bigger the price gap between the body of the hanging man and the following day’s opening price, the more likely it is that the hanging man is forming a top. A black candlestick can be one more confirmation of the bearish character of the market. The closing price of this candlestick is lower than the closing price on the day the hanging man appeared (picture 2).



Picture 2. The appearance of a black candlestick confirmed the formation of a “hanged man” pattern and the reversal of a bullish trend.

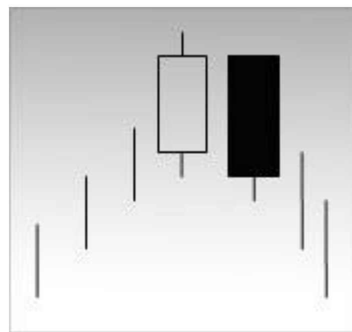
It is quite the opposite for hammer patterns – a big price gap upwards between the hammer body and the opening price on the next day or a white candlestick appearance when the closing price is higher than the closing price on the day the hanging man appeared determines the high probability of the fact the hammer forms the bottom (picture 3).



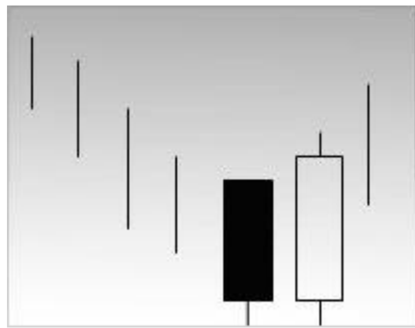
Picture 2. A hammer which appears at the beginning of October determined the pause in the bearish trend for more than two months.

ENGULFING PATTERN

Both the Hammer and the Hanging man are single-candle patterns. However, most signals arising in candlesticks charts are based not upon the single candlesticks, but on their combinations. One such combination is the engulfing pattern. It applies to the number of the most important signals of reversal and is formed by two candlesticks with bodies of different colors (picture 4 a-b).



Picture 4a. Bearish engulfing model. It forms in the ascendant market. The "engulfing" of the white body of the candlestick by the black one is a signal of reversal at the top. In this situation it is obvious that bears take over the initiative.



Picture 4b. Bullish engulfing model. A downtrend prevails in the market, then a bullish candle with a white body appears, as though it engulfs the previous candle with the black body. It indicates that buyers' pressure exceeds the sellers' pressure.

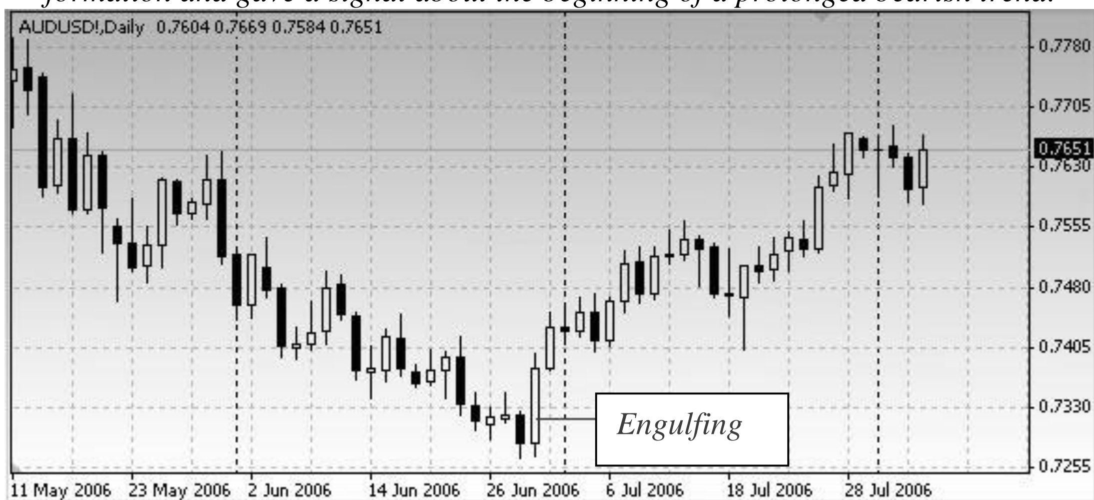
The engulfing pattern must meet three conditions:

1. An up- or downtrend (even short-term) should be strongly marked on the market.
2. The engulfing pattern is formed by two candles. The second body should engulf the first one (shadows cannot engulf).
3. The second body must be contrast in color. So after the long downtrend a short black body is being engulfed by a long white body, it can be a signal of a bottom reversal. The engulfing of a short white body during the uptrend by a long black body can be considered as a top reversal.

Below are some factors which increase the probability of a trend change after an engulfing pattern:

1. If the first candle of the model has a short body and the second one – a long one, it indicates that the previous trend slackens, but new one is growing in strength (picture 5-6).
2. If an engulfing pattern appears after a protracted or too swift of a trend. If a trend lasts long, then all the potential buyers have already taken up long positions. In this case it is not likely to see a big number of buying which is necessary for moving the market upwards. A fast price rising "protracts" the market and makes traders implement their profit closing positions (picture 5-6).
3. If the second price of the model engulfs several bodies.

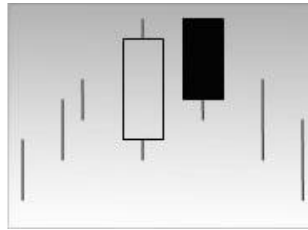
Picture 5. Engulfing on the top in June and February confirmed a double top formation and gave a signal about the beginning of a prolonged bearish trend.



Picture 6. The bullish engulfing at the end of July gave a signal about a reversal and the beginning of a bullish trend.

DARK CLOUD COVER

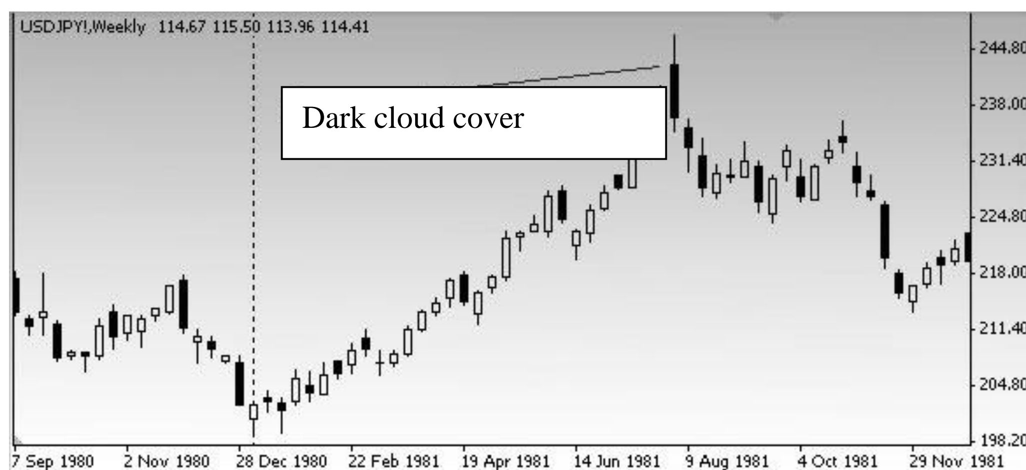
The next reversal pattern we would look at is called a dark cloud cover (see picture 7a-b). This model consists of two candles appearing after the upward trend (or at the top boundary of the trading corridor), and signals a reversal on top. On the first day a candle with a long white body appears. The next day's opening price exceeds the maximum of the previous day (i.e. it is above the upper shadow of the first candle). However, by the end of the day the closing price approximates to the daily minimum and covers the major part of the previous candles with the white body. The lower the closing price of the second candle (the more of the white body covered by the black body of the second candle), the higher the possibility of a top formation is. Some candlesticks analysts consider that the closing price of the black candle should cover more than 50% of the white body. If the closing price of the black body does not reach this 50% level, it is better to wait for more signals confirming the probability of a bearish trend.



Picture 7a. A schematic image of a dark cloud cover

The factors which intensify the significance of the dark cloud cover pattern are:

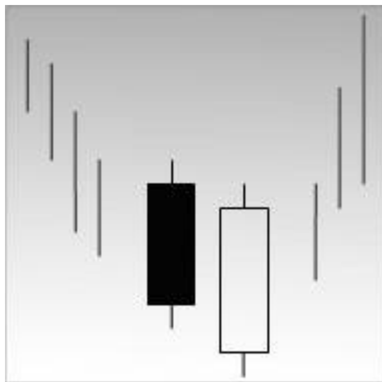
1. The closer the closing price of the black candle is to the opening price of the previous white candle (the more of the white body covered by the black one), the higher the probability of a top formation. If the black body covers the previous white body completely, then a bearish engulfing model forms. In a dark cloud cover pattern the black body just partially covers the white one. That is why dark cloud cover patterns resemble a solar eclipse, i.e. only a part of the preceding white body is covered (picture 7 b). The bearish engulfing model is a complete eclipse of the Sun, where the whole Sun (i.e. the white body) is covered. Consequently, the bearish engulfing model is a stronger reversal signal. If a long white candle is formed with a closing price higher than the maximums formed by the dark cloud cover or the bearish engulfing model, we can predict that prices will rise.
2. If during a long uptrend a candle with a long white body appears with an opening price equal to the daily minimum (i.e. it does not have a lower shadow), the closing price is equal to the daily maximum (i.e. it does not have an upper shadow) and next day's long candle with a black body opens at the maximum and closes at the minimum, one can say that this is a "black day with a cut top and a cut bottom".
3. If the second candle of a dark cloud cover (i.e. a candle with a black body) opens higher than the important resistance level and then the price falls, it is a proof of the fact that banks cannot control the market.



Picture 7b. A dark cloud cover – the significance of the model intensified by the black candle covering more than 50% of the white candle body.

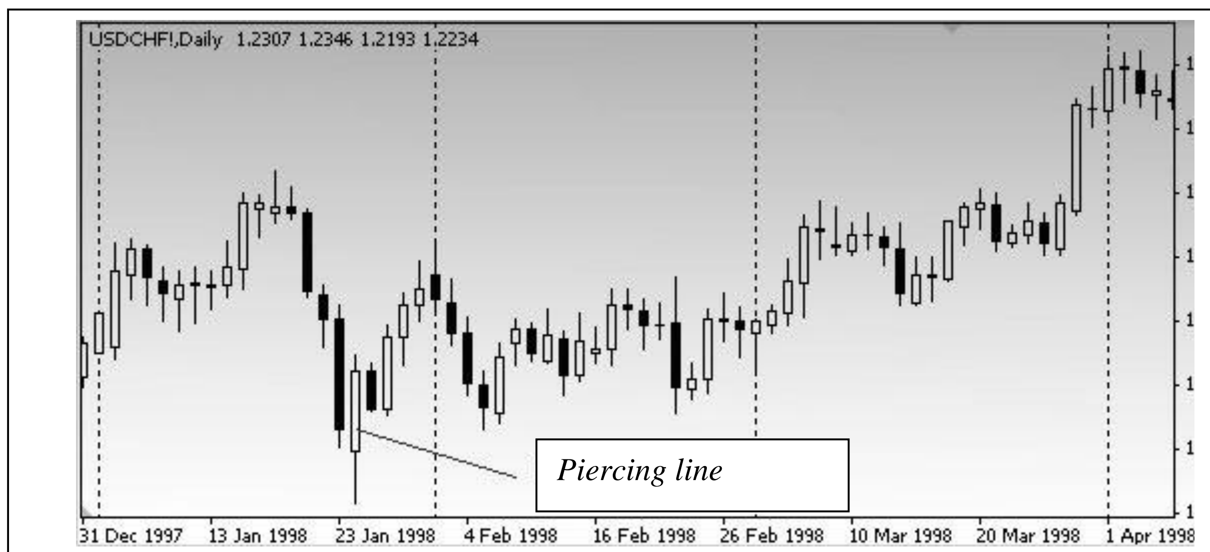
PIERCING LINE PATTERN

If a dark cloud cover is a signal of a reversal on top, then its opposite is the piercing line pattern – a signal of a bottom reversal (see pictures 8 a-b). It consists of two candles and appears during a downtrend. The first candle has a black body, the second one - a long white one. The white candle opens much lower than the price minimum of the preceding black candle. The price is rising, forming a rather long white body which closes above the middle of black candle's body.



Picture 8a. A schematic image of a piercing line pattern.

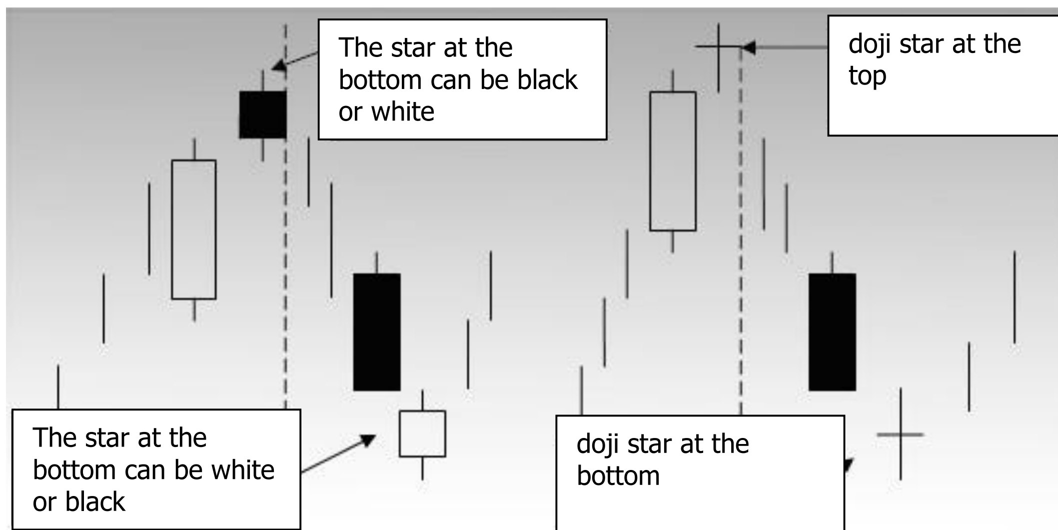
The bullish piercing line pattern is close to the bullish engulfing model. In the bullish engulfing model the white body fully covers the previous black body. In the bullish piercing line pattern the white body just partially covers the preceding black body. The more of the black body is covered by the white body, the higher the probability of a bottom reversal. The hidden psychological motive of the piercing line model is that the downtrend prevails on the market. This can be confirmed if a bearish candle with a black body appears. Next day's opening price forms a gap downwards and appears lower than the previous minimal price. Then prices start rising and by the end of the trading day the closing price not only becomes equal but considerably exceeds it. The significance of the piercing line pattern is determined by the mirror image of the same factors as those of a dark cloud cover model. In the case of a piercing line model, the rule of 50% covering of the previous candle must be more strictly observed than when we deal with a dark clouds cover model (picture 8b).



Picture 8 b. A piercing line pattern can pretend to the status "ideal" – the opening price of the white candle is lower than the minimum of the previous one; the real body of the black candle is covered by more than 50%.

STARS

Stars are some of the most mysterious signals of a reversal. A star is a candle with a short body which forms a price gap with the preceding candle which has a long body (see picture 9 a). The main condition for a star formation is a gap between its body and body of the previous candle, while an intersection of the shadows' is acceptable. The color of the candle is not important. Stars can appear both at the bottom and at the top. If a candle corresponds to a doji, i.e. it has a horizontal line instead of a body, it is called a star doji (see picture 9 b). Stars, especially stars doji, signal a probable completion of the previous trend. If a candle has a small body, this could indicate that the exhausting fight between bulls and bears came to a full stop. If a strong uptrend prevails on market, the situation is under bulls' control. If a star appears after a candle with a long white body in an uptrend, this is a signal that buyers' rule on the market is over and there is an adjustment between demand and supply. This balance is made conditional by a pressure release of buyers or a pressure amplification of sellers. Anyway, a star signals the potential of an uptrend is exhausted and market change is probable. The mirror image of the same is true for stars in a downtrend: a star appearing right after a long black candle indicates a change in the alignment of forces on the market. If during the downtrend bears ruled the market, the situation changes after the star's appearance: the forces of bulls and bears become equal. The energy that pressed down is weakening. Bears lose their firm ground.



Picture 9a. Schematic image of a star candle.
Picture 9b. Schematic image of a star doji candle.

Stars fall into four reversal models:

1. Evening star;
2. Morning star;
3. Star doji;
4. Shooting star.

The body of the star can be white or black in these patterns.

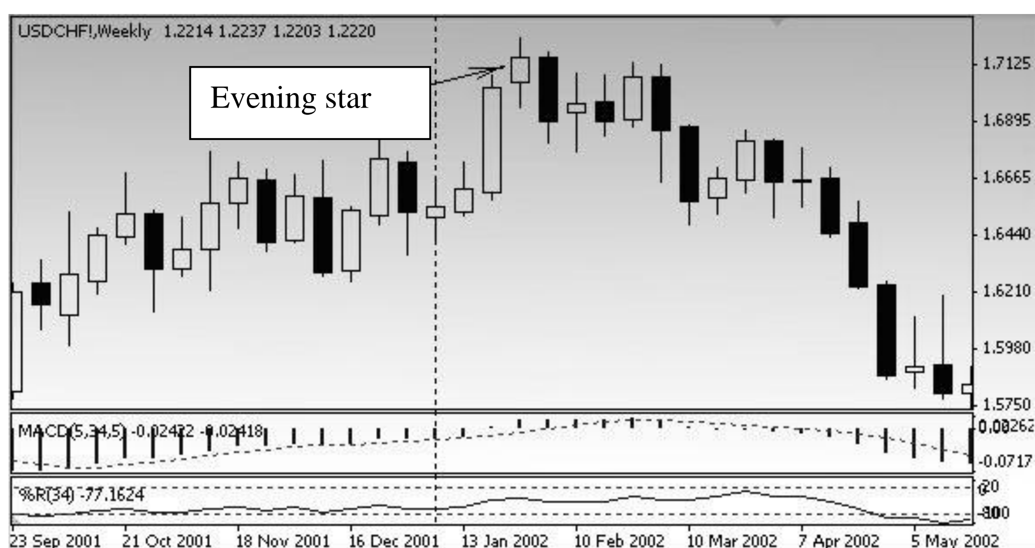
MORNING STAR

The Morning star (see picture10) is a bottom reversal pattern. The morning star pattern consists of a candle with a long black body which is followed by a short-bodied candle with a gap downwards (these two candles form the simplest model star). On the third day a white candle arises whose body covers a major part of first day's black body. This pattern signals that bulls seized the initiative.

Picture 10. Morning Star reversal pattern. The model was affirmed by the strong white candle which appeared after the star formation.

EVENING STAR

The evening star is a bearish double of the morning star. The evening star pattern is a signal of a reversal at the top, so it becomes a signal to actions only if it appears after an uptrend (picture 11). The evening star consists of three candles. The first two candles have long white bodies which are followed by a star. The star is the first hint of the market approaching the top. The third candle confirms the formation of a top and completes the pattern. The third candle has a black body which covers the major part of the white body of the first candle.



Picture 11. An evening star model. After the long-term uptrend, the star which formed gave a signal about the probable change of the trend.

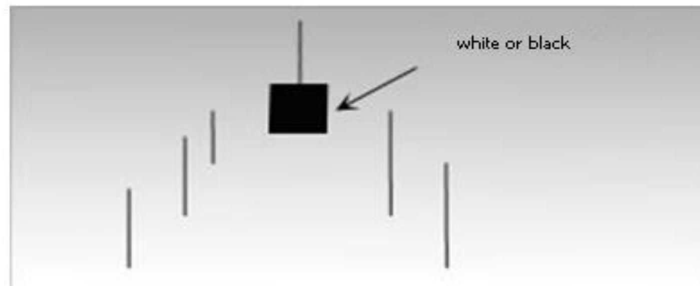
The “Morning star doji” and “Evening star doji” reversal models are different from the patterns considered above by the following feature. Instead of a candle with a short body, a candle forms whose opening price is equal to the closing price, whose absence of the body arose from. The rest of the requirements for these models’ formation are similar to the models morning star and evening star, but star dojis are considered to be more important because they conclude with a doji candle.

Basically all models composed of a star should have a price gap between the first and the second bodies and one more gap between the second and the third bodies. However, as experience has shown, the second gap appears seldom and is not obligatory for this model’s successful work.

SHOOTING STAR AND INVERTED HAMMER

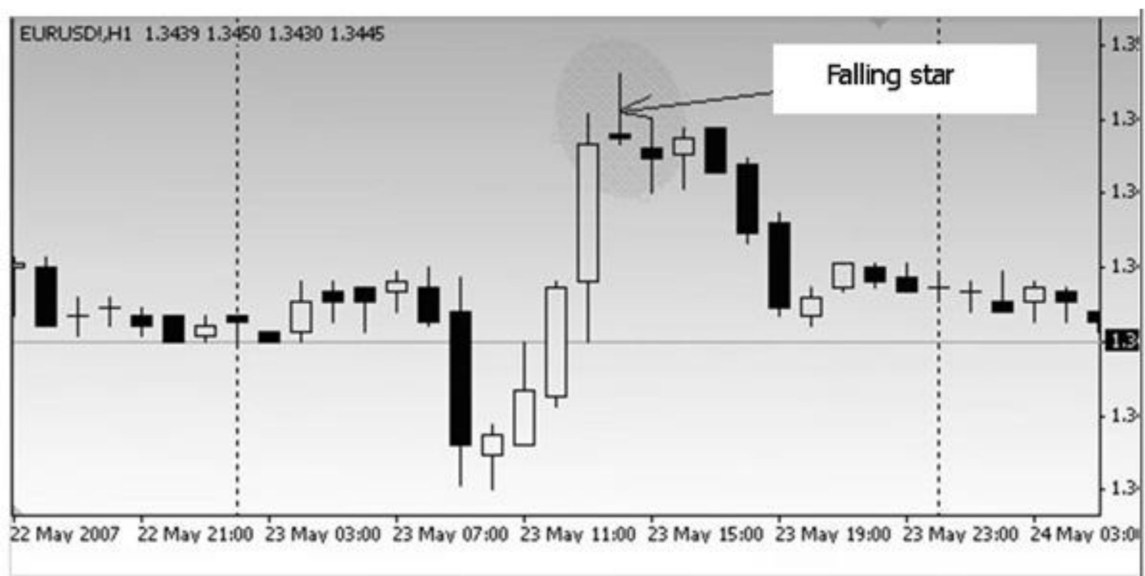
“Shooting star” is a model of one candle warning about the probable end of the price rising. Its appearance corresponds to its name. In contrast to the evening star, the shooting star is not such an important signal of reversal. As it is shown in picture 12, the shooting

star's body is short and placed at the bottom part of the price diapason of a candle; the upper shadow is long. Like with other stars, the color of the body is not important. The body of the ideal shooting star leaves a gap relative to the body of the preceding candle. However, as it will be shown below, this gap is not invariable.



Picture 12. Shooting star

This candle demonstrates that the trading session was opened close to the daily minimum, and then the price swiftly rocketed upwards and fell again so that the closing price approximates the opening price. In other words, the price rising during the trading session appeared to be unfounded.



Picture 13. After a four-day immutable price rising, the price swiftly shot upwards and fell again.

Along with reversal patterns, candlestick combinations, as it was mentioned above, can form continuation patterns. Let us examine some of them.

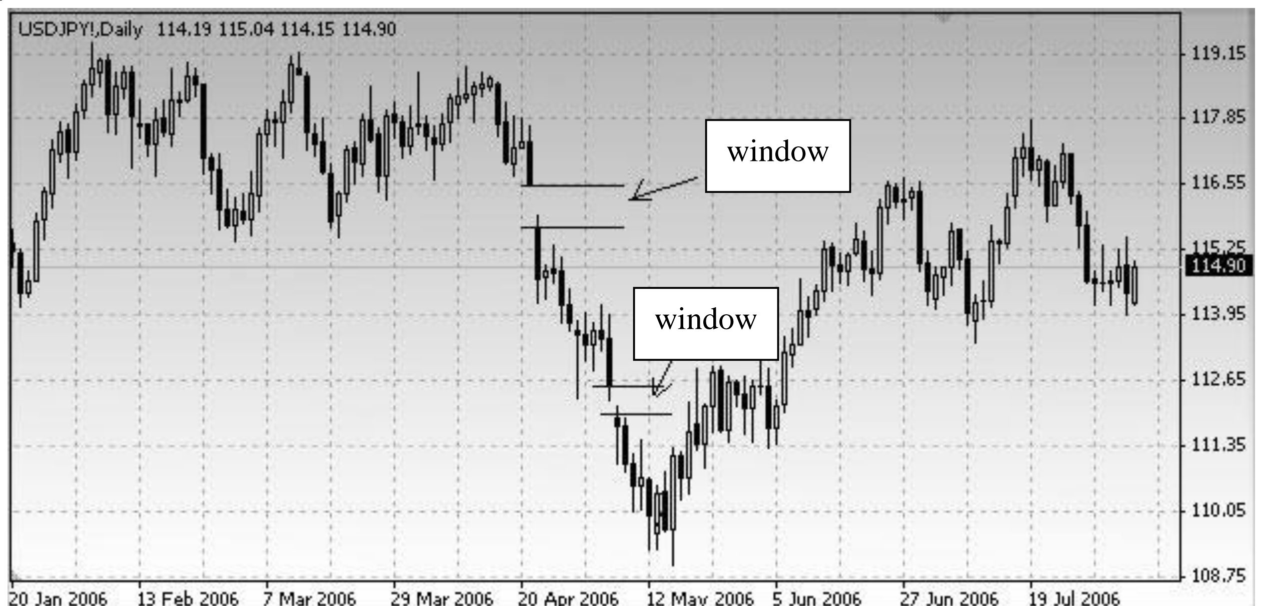
WINDOWS (GAPS)

The Japanese call the price gap a "window." If in the western graphical analysis one uses the expression "to fill in the price gap," then in Japan "to close the window" is used. Let us consider the concept of the "window." A window is a price gap between the closing and

opening prices of the current and preceding trading days (sessions). In picture 14 open windows in the uptrend are shown. A price gap appeared between the upper shadow of the previous candle and lower shadow of the one following it.

Picture 14. Windows in the uptrend confirmed the price rising, but formed an engulfing which indicated a change of power on the market.

In picture 15 a window in the downtrend is shown. There is no price fluctuation between the lower shadow of the preceding candle and the upper shadow of the current day's candle.



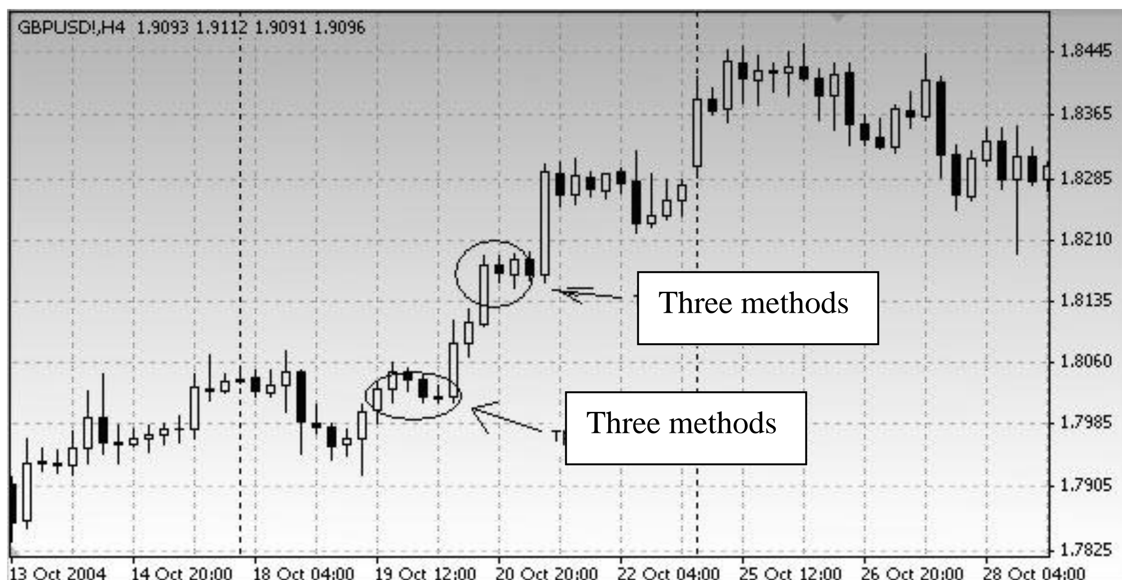
Picture 15. Windows in the downtrend are like continuation patterns. Note the trend reversal indicated by two reversal models – piercing line and bullish "Engulfing" patterns.

Japanese analysts take up the position that trading should be opened to the direction indicated by the window. Windows also become resistance and support areas. So a window in an uptrend is a signal of further price rising. During the correcting falls this window should support the prices. If as a result of a correcting fall the window closes and sellers' pressure remains, the preceding uptrend is complete. A window in the downtrend signals about further price falling. Any correcting price risings will face the resistance at this level. If the window closes because of a price rising, then the downtrend is over.

"THREE METHODS" PATTERN

There are two variations of this pattern: a bullish model "three methods" and a bearish model one. They are continuation patterns. The following elements comprise the bullish model "three methods" (see picture 16):

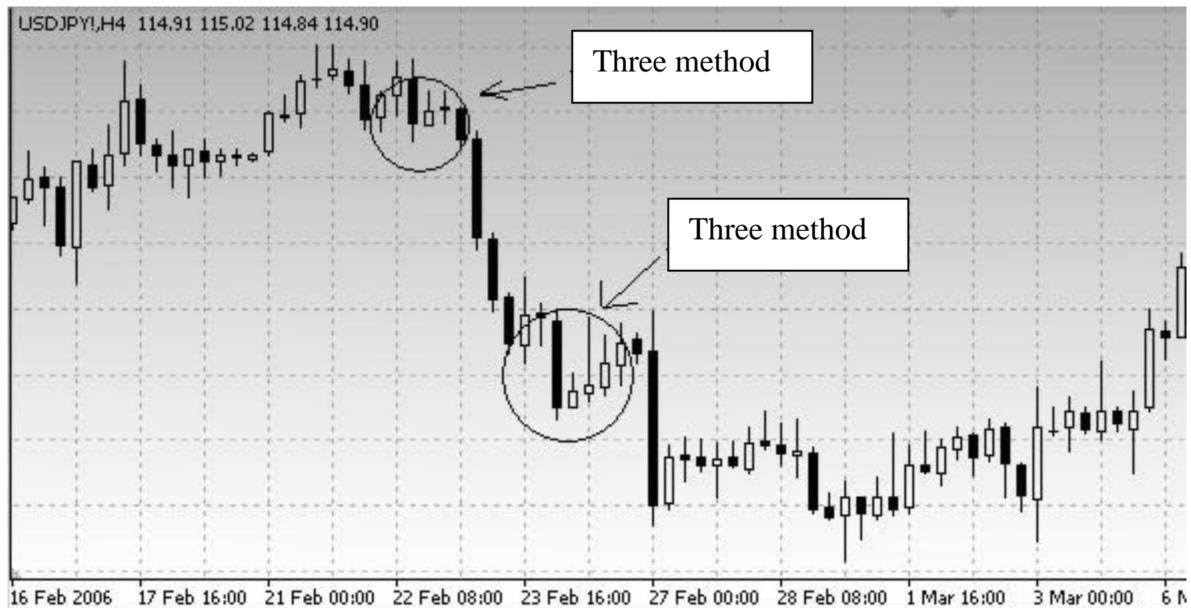
1. A long white candle.
2. After this white candle a group of falling candles with short bodies follows. The ideal model has three such candles but there can also be two or more than 3. The most important thing is that they should not transcend the diapason of the white candle prices. Short candles can be any color but most often they are black.
3. The last trading day should be represented by a long white candle with a closing price higher than the closing price of the first day. The opening price of the last candle in the model also should be higher than the closing price of the preceding trading day. This model resembles bullish flags and pennants in the western tradition of graphical analysis. The "three methods" pattern is associated with a break from trading or a respite between battles. Simply speaking, with the appearance of short candles the market stops for a rest.



Picture 16. Model "three methods" in a bullish trend.

A bearish pattern "three methods" (see picture 17) is forming in a downtrend. First of all, a long black candle arises. It is followed by three short gradually rising candles (usually white), which are in the price diapason of the first candle (including shadows). The opening price of the last trading session should be lower than the preceding closing price, and the

closing price – lower than the closing price of the first black candle. After this last session represented by a black candle, the price falling should continue. This model resembles bearish flags and pennons in the western graphical analysis.



Picture 17. Model "three methods" in a bearish trend.

This is far from a complete list of the patterns which are based on the candlestick analysis method. We considered the most significant reversal and continuation models which are abundant on the market and provide the most reliable signals for analysis and decision making.

Test Questions

1. Describe the major criteria of an evening star pattern determination.
2. What is the difference between the bullish "engulfing" and piercing line models?
3. What is "three methods"? What prospects are expected in case this pattern appears?
4. In what trend can a morning star model be formed?
5. A dark cloud cover pattern was formed and confirmed on the market. What position (long or short) would you open?
6. A window model was formed in an uptrend, what actions will you take?

a) close a previously opened long position;
b) open a short position;
c) expand the previously open long position;
d) open a long position.