

This article is free to download from **www.geoinvest.info** for educational purposes. You can reprint it with a reference to the source:
© 2009-2010, **www.geoinvest.info**

Typical patterns on the price charts ***(Pattern recognition analysis)***

The price movement together with the **support** and **resistance lines** frequently form on the price charts typical patterns, which could enable us to predict the market behaviour.

Support line – a straight line, connecting two or more consecutive troughs on the price chart and thus limiting the price variation from below.

Resistance line – a straight line, connecting two or more consecutive peaks on the price chart and thus limiting the price variation from above.

Support and resistance lines could be horizontal or tilted. Horizontal lines could often be spotted on continuous time intervals and could swap their roles – when a support or resistance level is broken then support line may become resistance and resistance may become support.

The nature of the support and resistance levels is in the aggregate of psychological and economic factors like historically established or round numbers for the price, forming psychological blocks; or by the behaviour of big market players like state and national banks, pursuing their monetary policies.

Patterns may help to predict continuation of a trend or its reversal.

Trend – prevailing and persistent tendency in the price behaviour confirmed on a continuous time interval usually by averaging. Two types of trend are being distinguished: “bull” trend – for rising price and “bearish” trend for falling.

“Triangles” and a “pennant” are usually considered to be indicative of a trend continuation.

Ascending triangle
Continuation of the trend

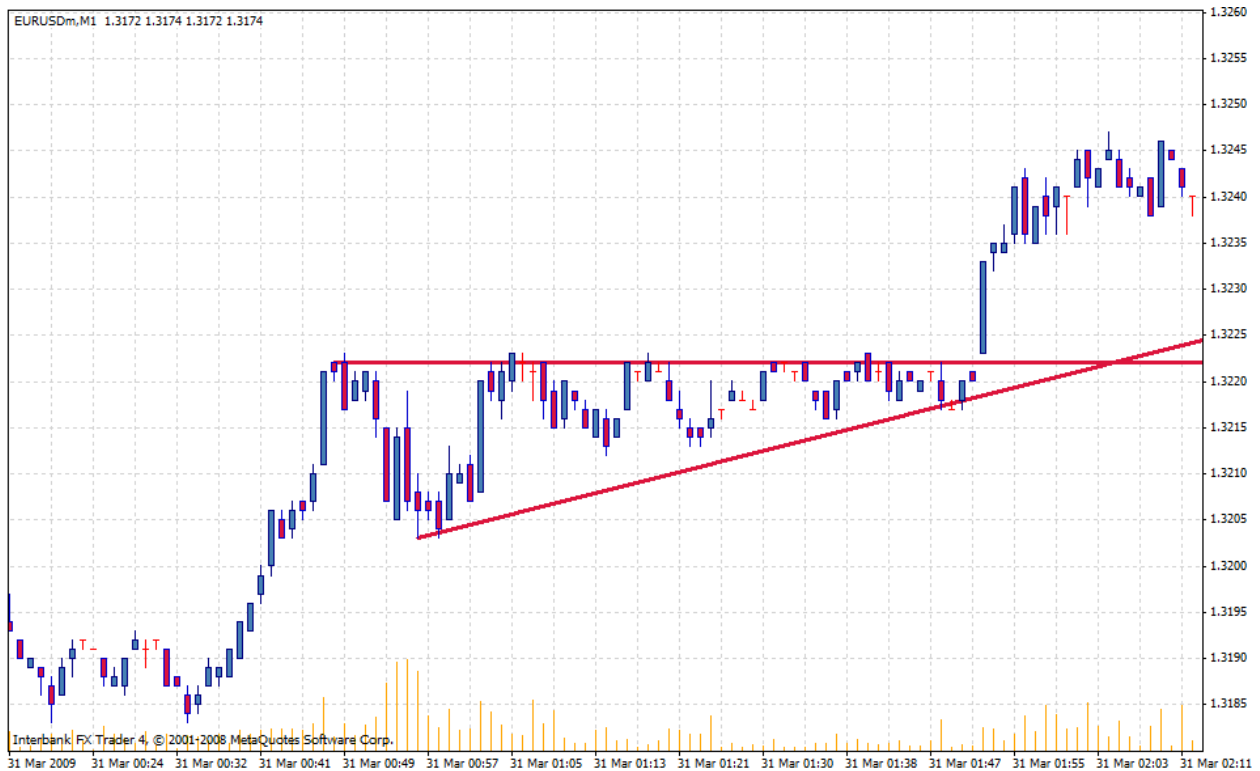
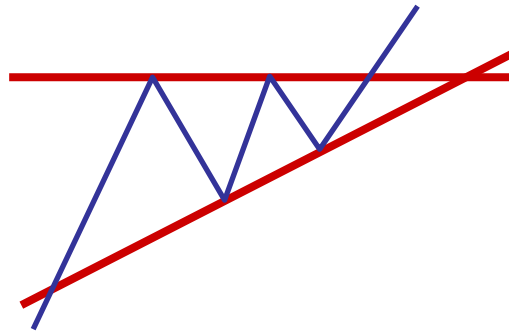


Fig. 1 **Ascending triangle**

As you can see in the drawing and the chart for the “ascending triangle” (Fig. 1), the rising pressure from below causes the horizontal resistance line to be “punctured” and the uptrend continues.

The price surge that usually happens after the breakthrough is approximately equal to the swing in the first zigzag at the aperture of the triangle.

Descending triangle
Continuation of the trend

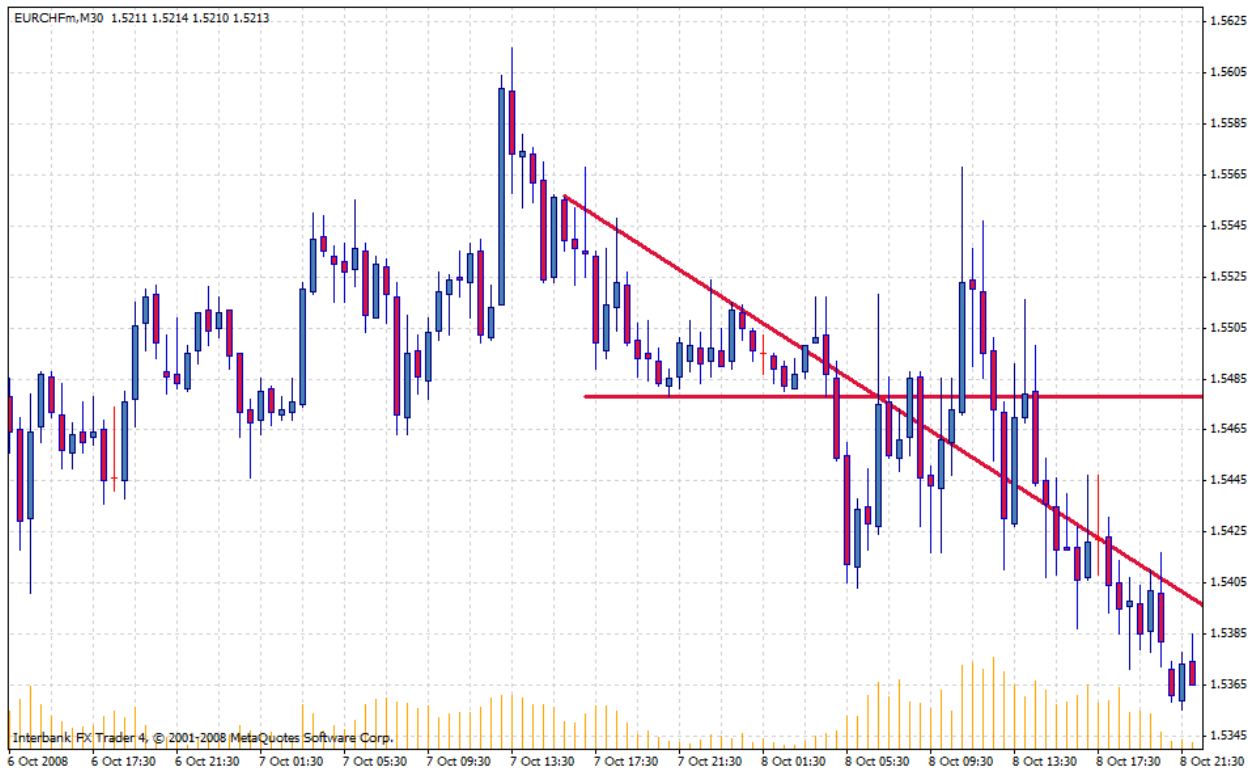
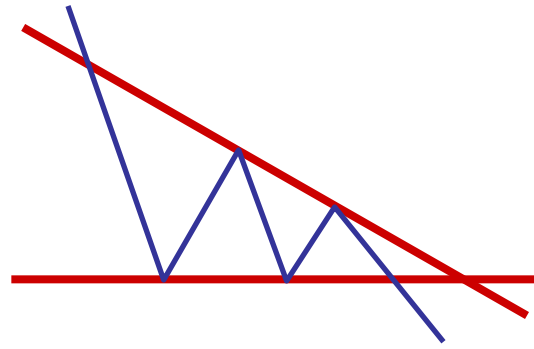


Fig. 2 Descending triangle

Similarly, in the “descending triangle” (Fig. 2) rising pressure from above results into the break through the horizontal support line and the downtrend continues. The price surge that happens after the break through is approximately equal to the swing in the first zigzag at the aperture of the triangle.

Triangle
Continuation of the trend

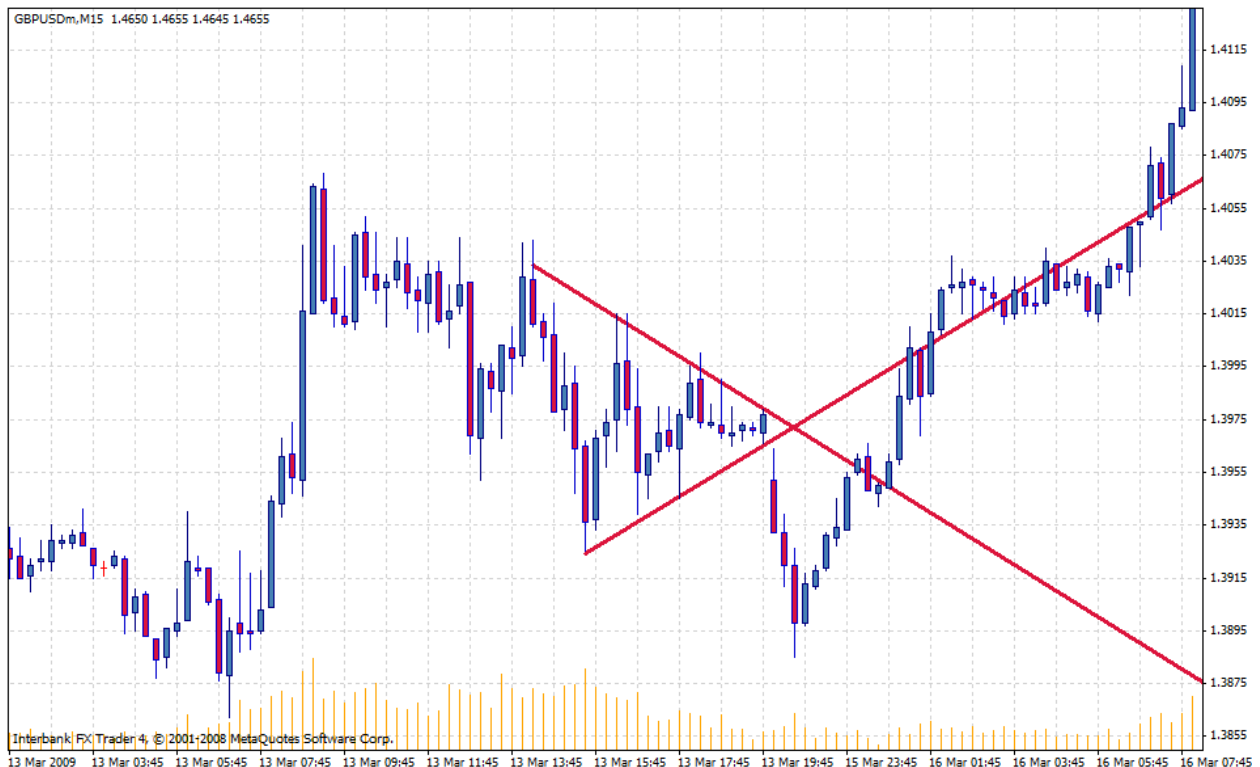
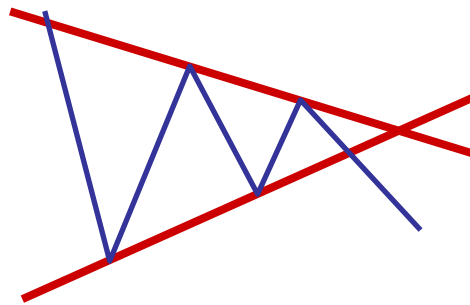


Fig. 3 **Triangle**

“Triangle” (Fig. 3) could be formed by two tilted support and resistance lines. Here, after the breakthrough the downtrend continues, and, typically for all triangles, the price surge is approximately equal to the swing of the first zigzag, though soon after that, the trend changes into the up-going.

It is important to mention, that though the majority of the authors consider the triangles to be the trend continuation pattern, the direction of the breakthrough may be opposite. It is recommended to use other methods of technical analysis and to make decision concerning the direction of the breakthrough only on coincidence of signals from several indicators. So, one thing you can be sure of when you see a triangle being formed is that the break through one of the limiting lines will certainly happen, but the direction may not be obvious enough.

All charts, illustrating the formation of the triangles, have similar behaviour of the trading volume (see orange histogram in the lower part of the charts). This feature may be used as a confirmation of a triangle formation. As the support and resistance converge, the volume decreases, but then, with the breakthrough, the volume usually surges.

Pennant
Continuation of the trend

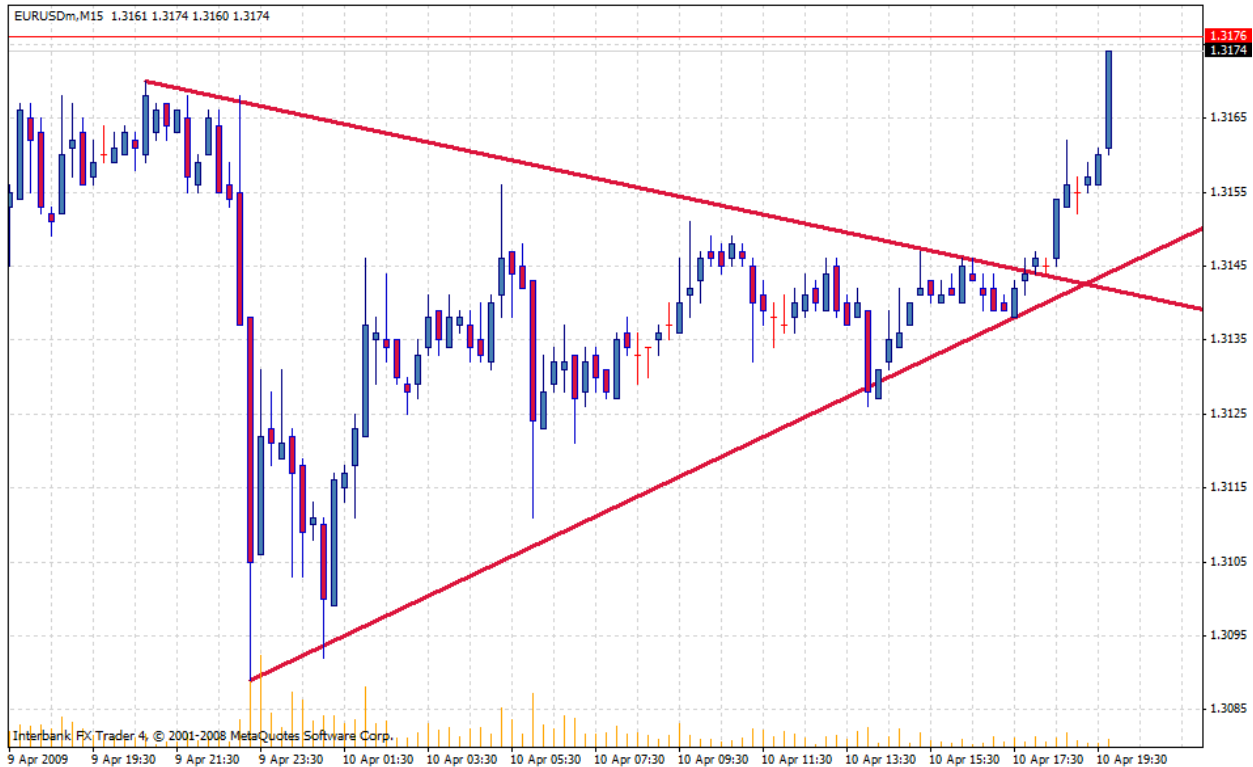
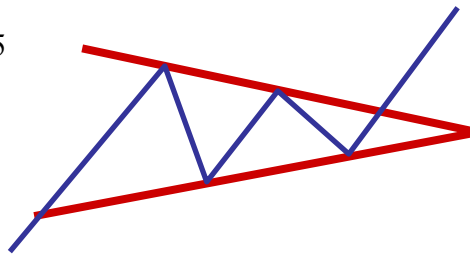


Fig. 4 **Pennant**

Many authors quite justifiably do not distinguish “pennant” (Fig. 4) from “triangles”. Nevertheless, we include it here to cover all the variety of terminology used. However, if you would meet mentioning of both “pennant” and “triangle” simultaneously, please bear in mind, that “pennant” is usually a shorter formation in an uptrend with an explicit “flagpole”.

The formation of triangles is caused mostly by psychological factors in the process of the **price consolidation** after considerable movements of the price. In the situation when the trend is not clear, majority of the traders are cautious; that leads to the drop in trading volume and, consequently, to the narrowing of the price fluctuations.

Price consolidation – the process of settling of a balanced and acceptable by the majority of the buyers and sellers price; stabilisation, decrease in the swing of random fluctuations. While consolidating the price would frequently “retrace” or undergo “correction” – change in the direction opposite to the initial trend. This retraction usually makes from 30% to 60% of the initial price movement.

The following patterns usually are considered typical for trend continuation formations, however even to a bigger degree than the “triangles” those shapes could end up into a trend reversal, so the use of ancillary methods of analysis is becoming mandatory.

Channel up
Continuation of the trend

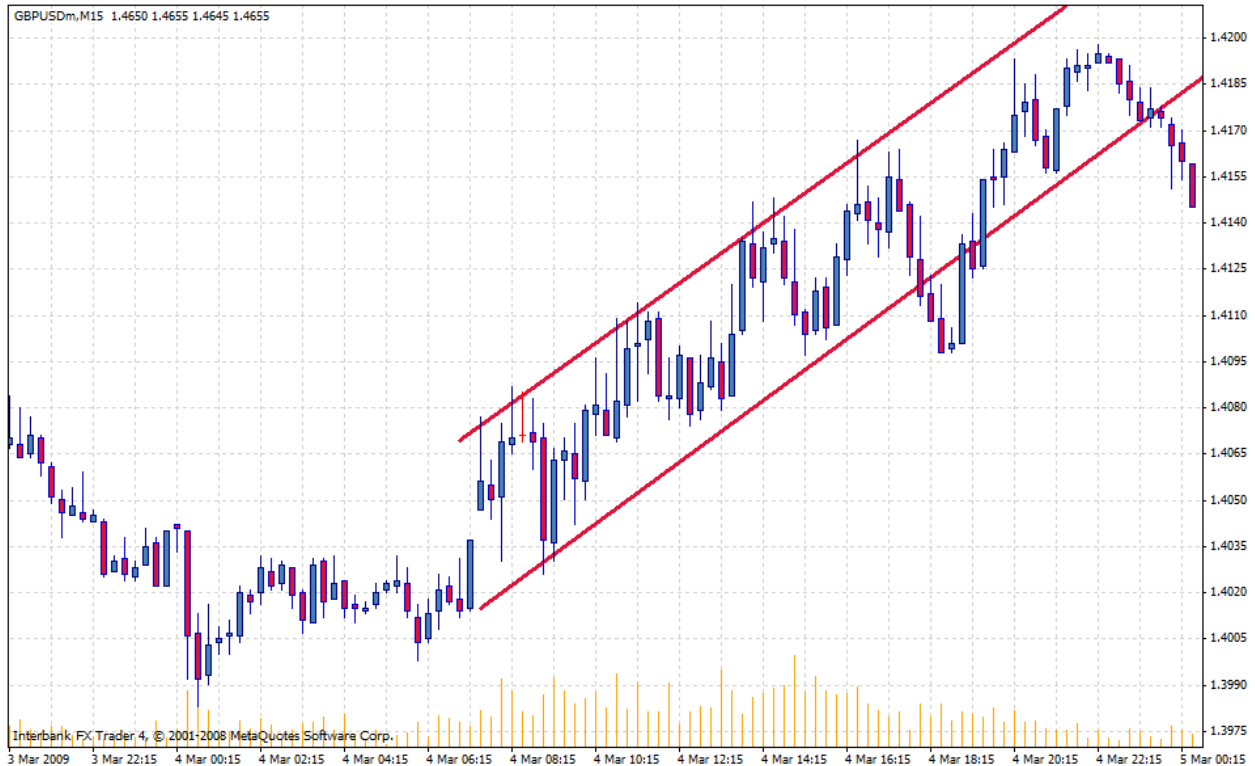
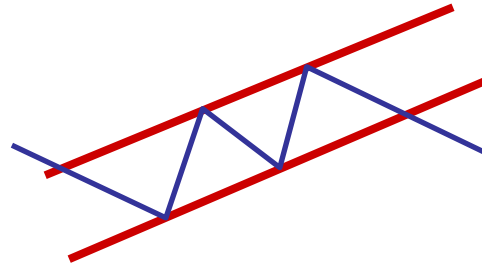


Fig. 5 **Channel up**

The chart at Fig. 5 shows an example of a “channel up”, where the price variation is limited by the two parallel tilted lines of support and resistance. You can see a “false breakthrough” after the fourth zigzag. Eventually after a partial retracement upwards inside the “channel” the price continues to follow its initial trend down.

Channel down
Continuation of the trend

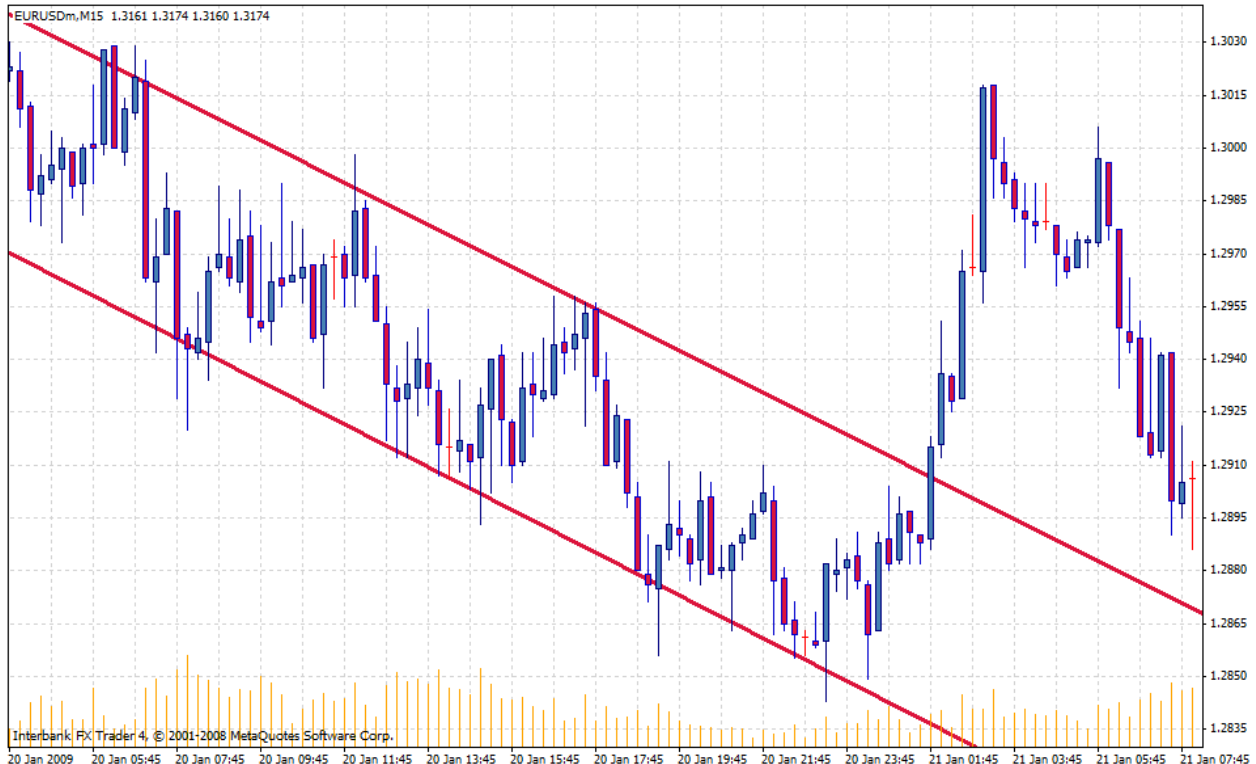
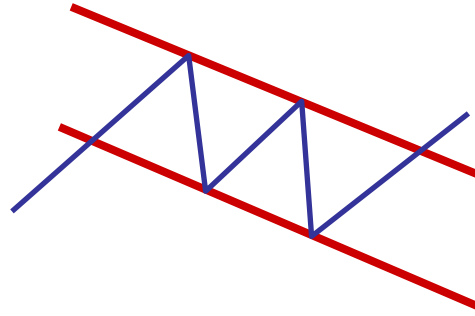


Fig. 6 **Channel down**

“Channel down” (Fig. 6) is completely similar to the “channel up”. The main price variation is limited by the two tilted parallel lines of support and resistance. The surge at the breakthrough is approximately equal to the width of the channel.

Flag
Continuation of the trend

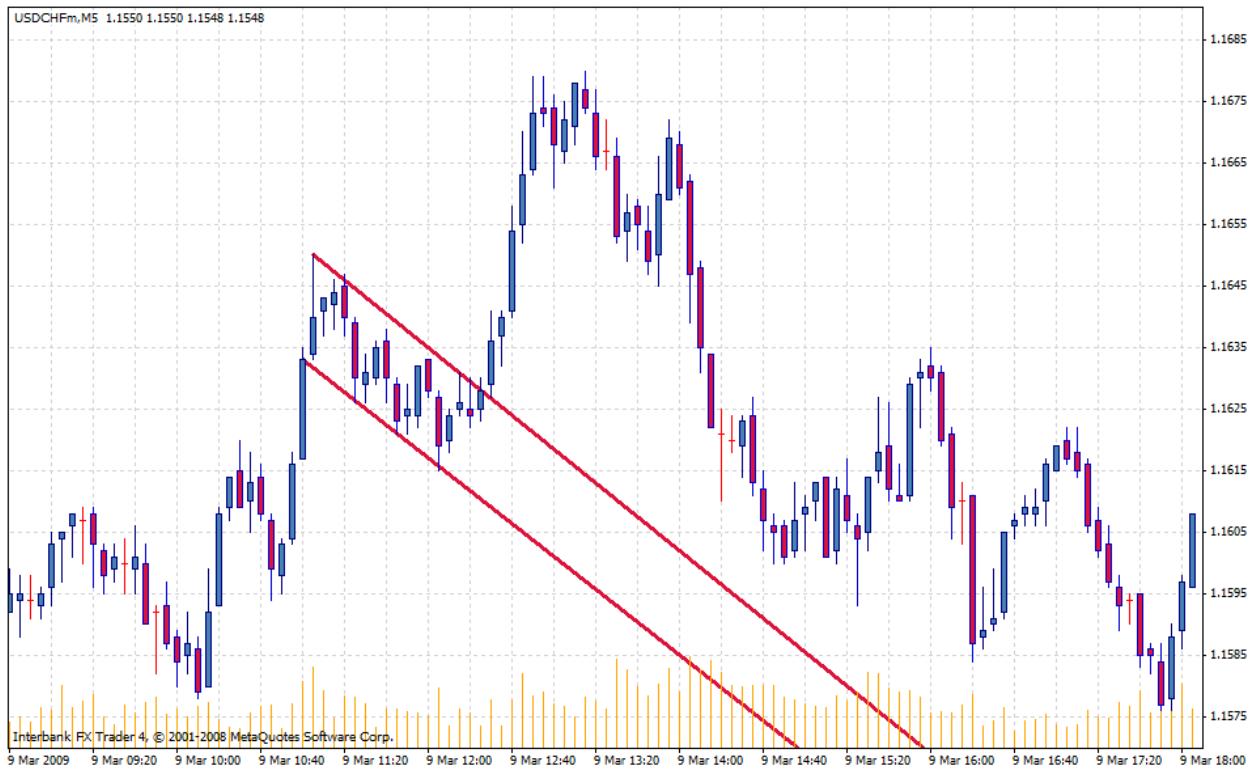
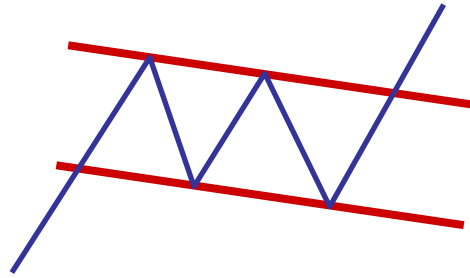


Fig. 7 **Flag**

“Flag” (Fig. 7) is very much similar to the “channels”, however this formation is usually shorter, causing smaller retracement in a price consolidation and has a definitive “flagpole”.

Rising Wedge
Continuation of the trend

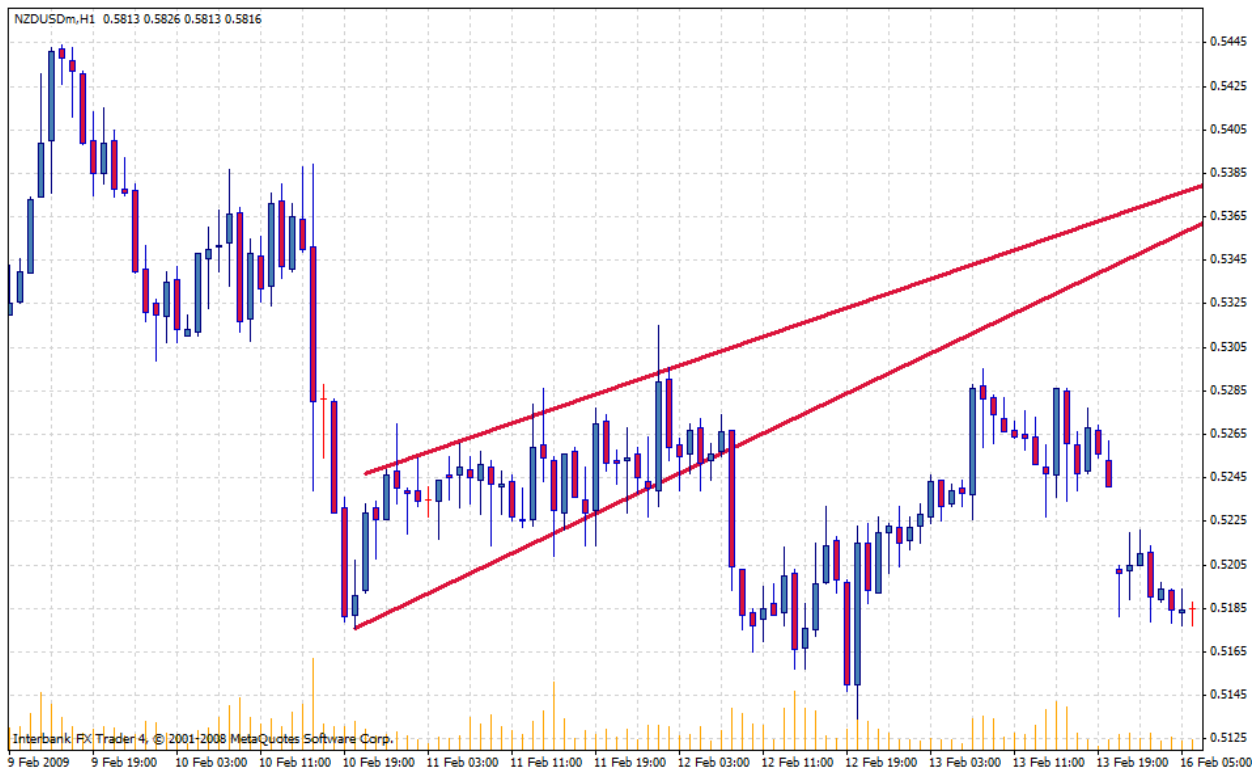
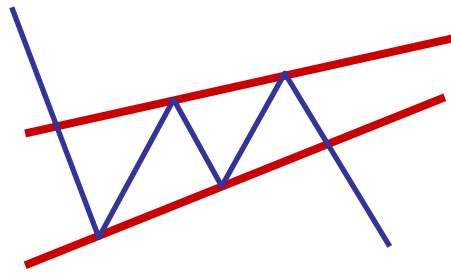


Fig. 8 **Rising Wedge**

“Wedges” (Fig. 8 and 9) – are the price consolidation formations with main price variation limited by the two converging tilted lines of support and resistance; they have very much similarity to the “channels”.

Falling Wedge
Reversal of the trend

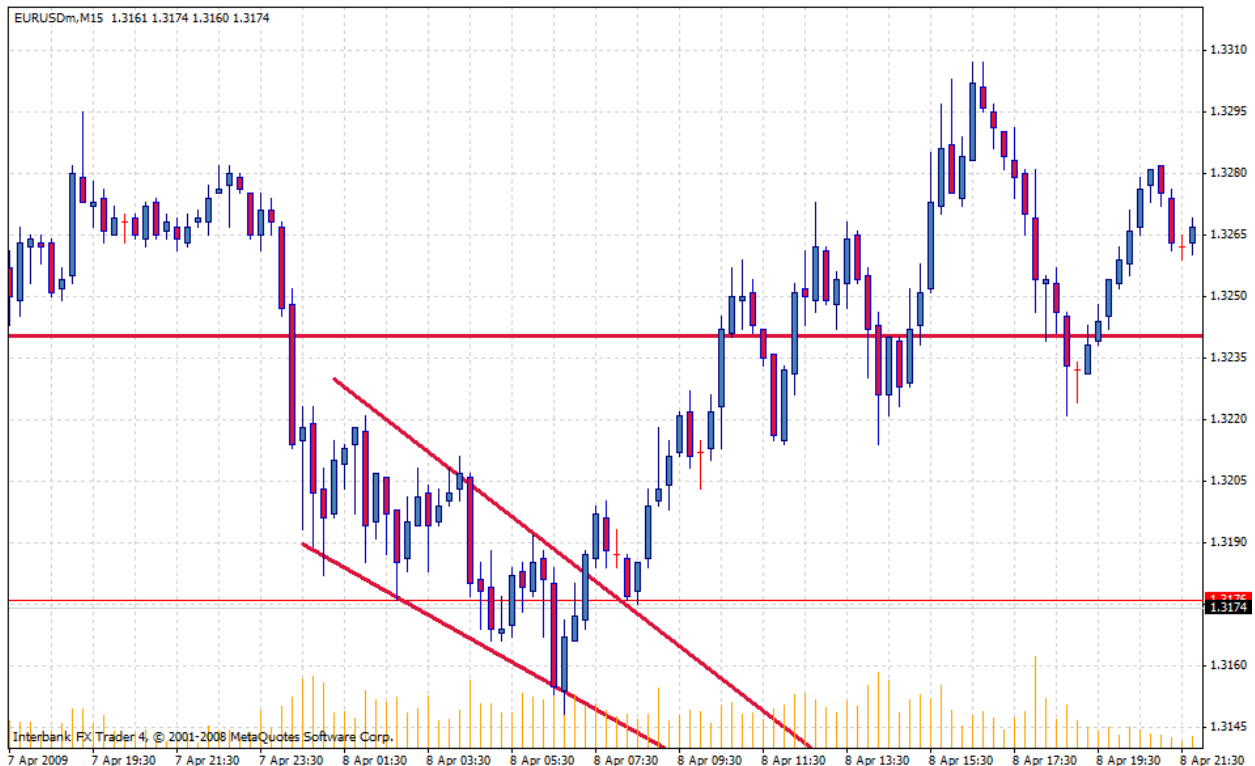
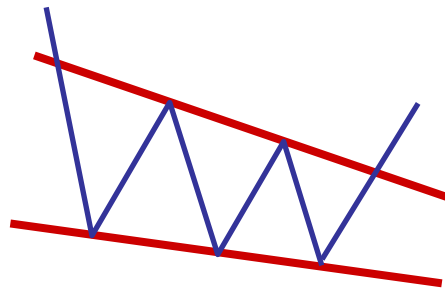


Fig. 9 **Falling Wedge**

As it was already mentioned, the real market does not always follow the theory, and the patterns, which are usually classified as formations of the price consolidation and the trend continuation could, as a matter of fact, mean the reversal of the trend.

To illustrate that here you can see a chart showing an example of a “falling wedge” (Fig. 9) ending up in a trend reversal. Application of auxiliary means of technical analysis could predict that kind of unexpected outcomes, however it is important to remain cautious.

Rectangle
Continuation of the trend

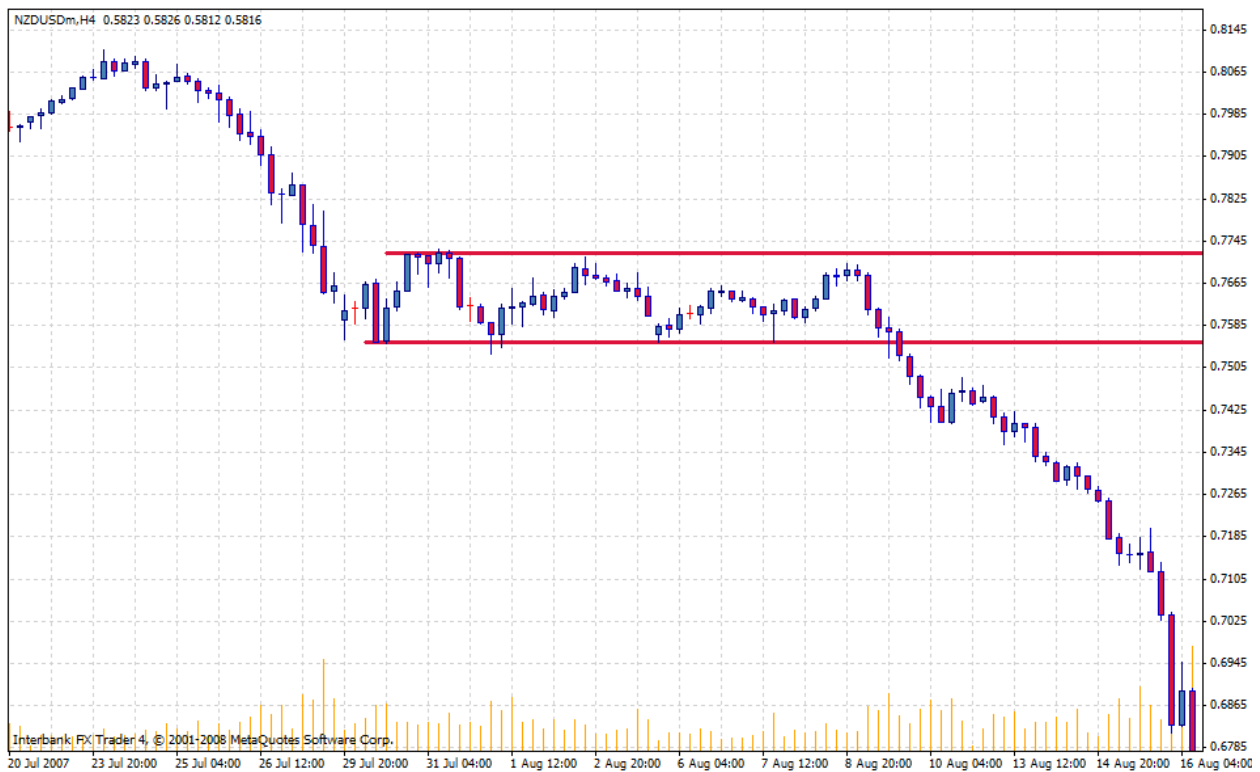
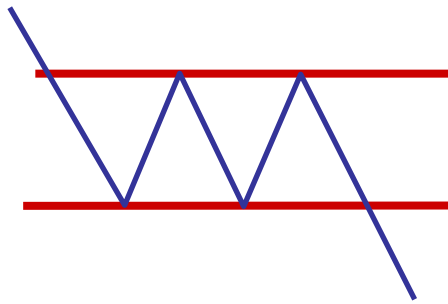


Fig. 10 **Rectangle**

“Rectangle” (Fig. 10) – is a consolidation formation, which limits the price variation by the two parallel horizontal lines of support and resistance; it is in general very much similar to the “channels”. Because the lines are parallel, the formation could be rather continuous and the breakout point could be hard to predict.

The following examples of the patterns could predict the trend reversal if correctly identified.

Head and shoulders
Reversal of the trend

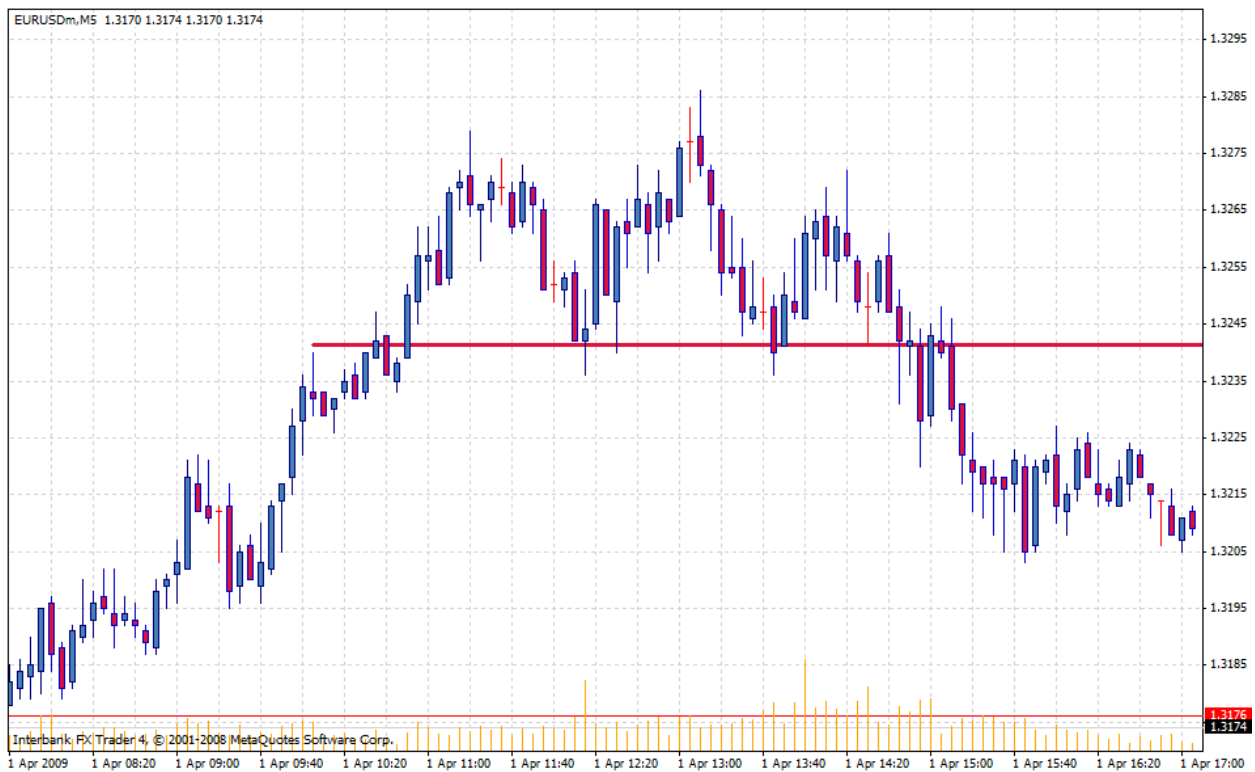
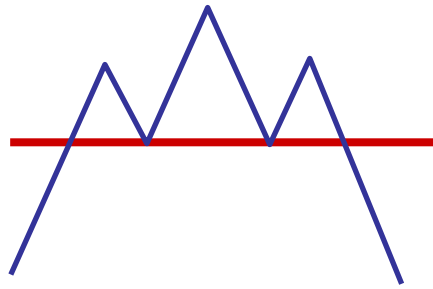


Fig. 11 **Head and shoulders**

The pattern “head and shoulders” (Fig. 11), is formed by the three peaks, where the central one is the highest, over the horizontal line of support. The formation happens mostly due to psychological reasons, when the confidence in the continuation of the uptrend leaves the “bulls” and the initiative is being overtaken by the “bears”.

«Bulls» – the participants of the market, expecting that the price would rise and inclined to buy.

«Bears» – the participants of the market, expecting that the price would fall and inclined to sell.

Inverse head and shoulders
 Reversal of the trend

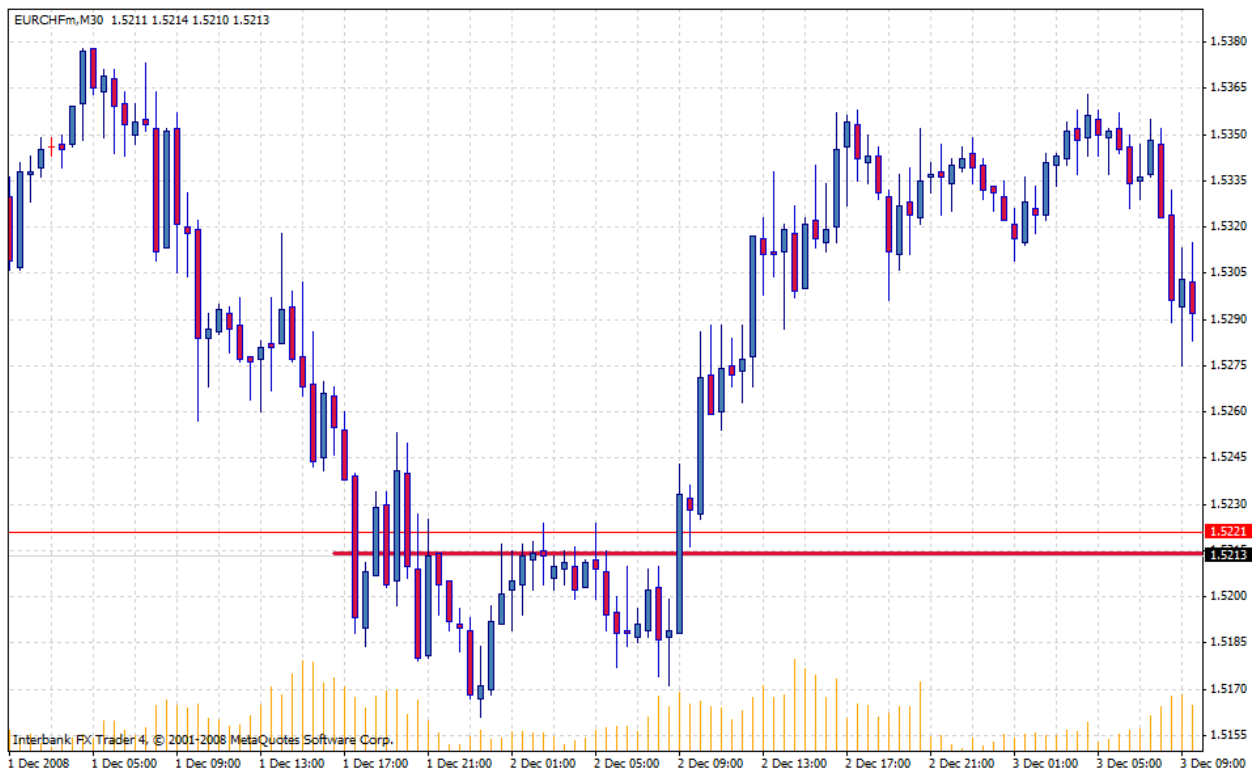
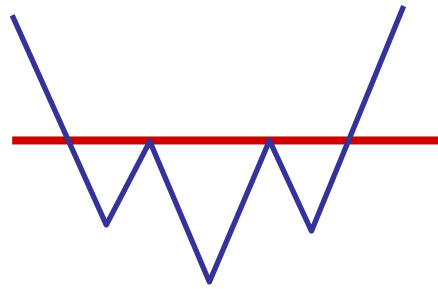


Fig. 12 Inverse head and shoulders

“Inverse head and shoulders” (Fig. 12) is a trend-reversal pattern, formed by the three peaks, where the central one is the highest, below the horizontal line of resistance. It is completely similar to the previous formation, but precedes the change from a “bearish” trend to the “bullish” one. The surge of the first break through the resistance is usually equal to the height of the central “head” peak from the horizontal line.

Triple top
Reversal of the trend

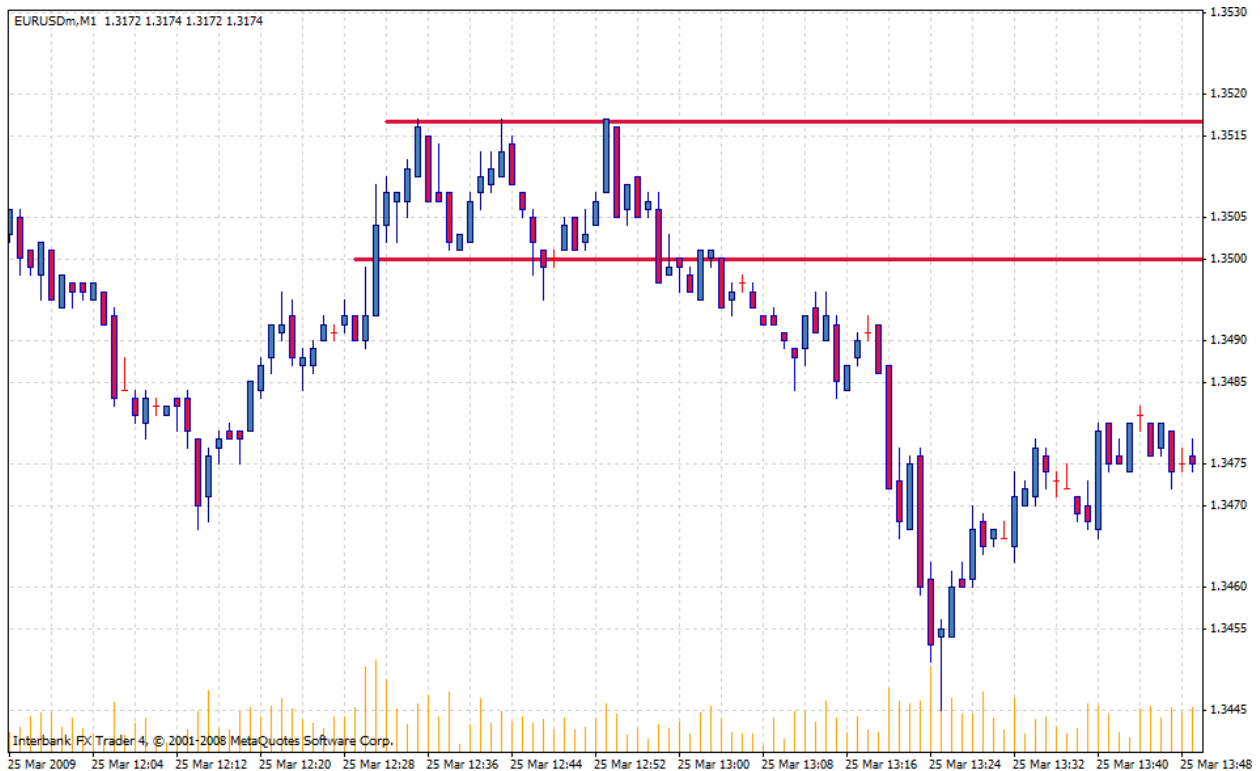
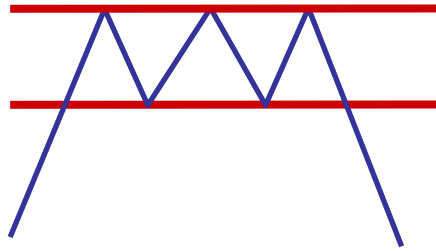


Fig. 13 **Triple top**

“Triple top” (Fig. 13) is formed by the three peaks of equal height over a horizontal support line. It is very much similar to the “head and shoulders”, but the probability of misinterpretation rises considerably, as the pattern could be mistakenly identified as a “rectangle” or some kind of a “wedge”. As a matter of fact it is possible to positively identify the formation only after the break through one of the horizontal lines has been completed, or, at least, emerged.

Triple bottom
Reversal of the trend

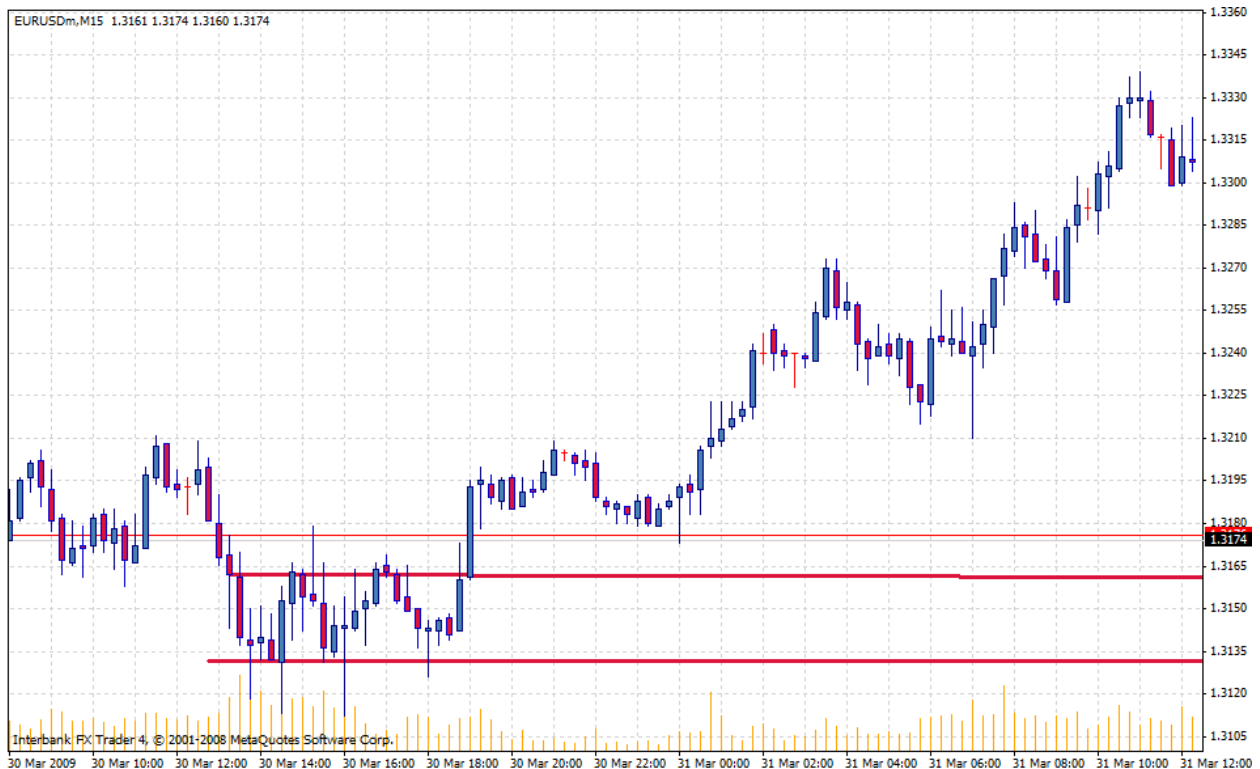
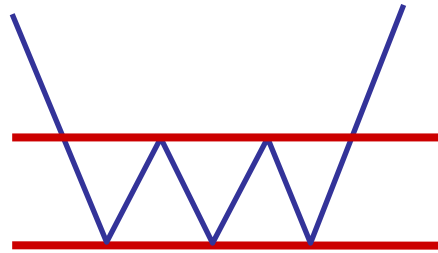


Fig. 14 **Triple bottom**

“Triple bottom” (Fig. 14) is formed by the three peaks of equal height under a horizontal resistance line. It is very much similar to the “inverse head and shoulders”.

First significant price movement after the breakthrough is usually equal in magnitude to the height of the peaks. As in the case of the “triple top” the probability of false identification is considerable because before the completion the pattern looks very much like a “rectangle” or a “wedge”. As you remember, those two would typically precede the continuation of the trend.

Double top
Reversal of the trend

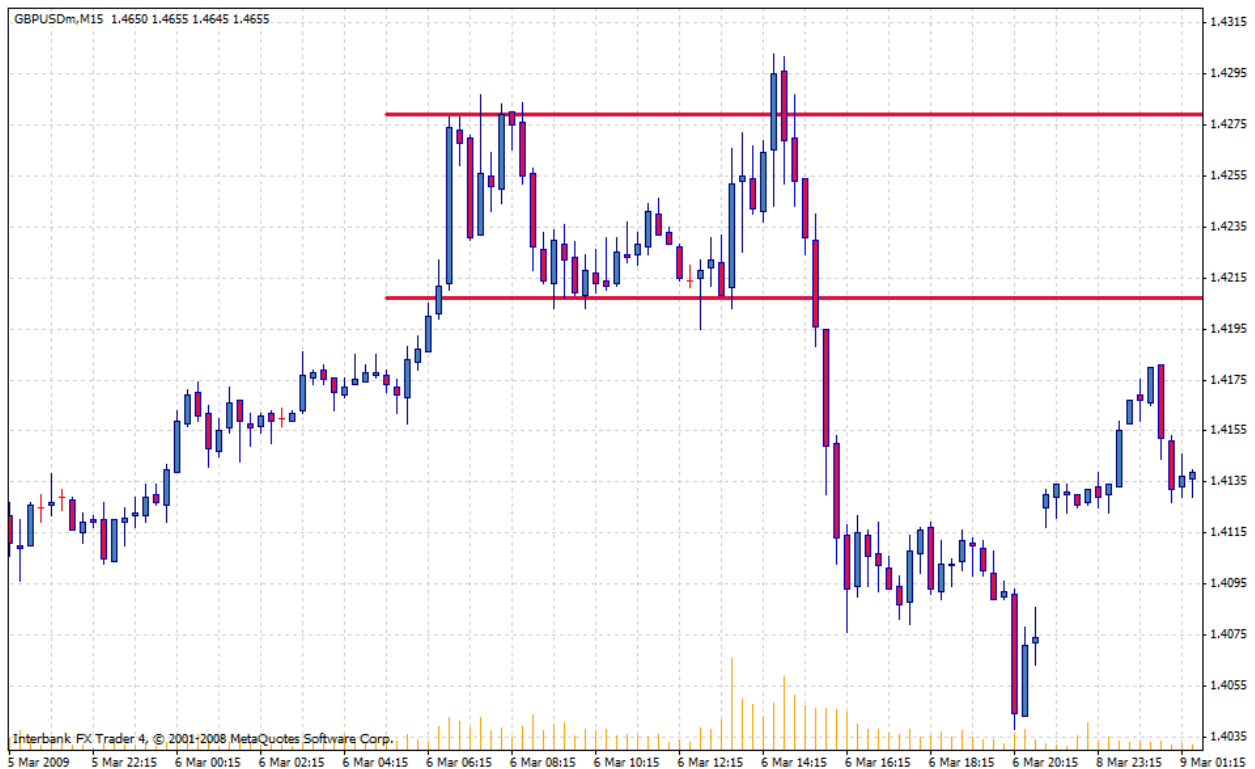
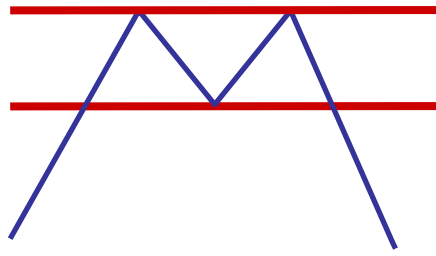


Fig. 15 **Double top**

The “double top” pattern (Fig. 15), formed by two peaks of approximately equal height over a horizontal support line is totally similar to the “triple top”, apart from that its correct identification becomes even more difficult. In reality, it is necessary to use other methods of technical analysis in confirmation of pattern recognition or enter the trade only after the break through the horizontal line has already happened. Some authors recommend using in such situations **pending orders “buy stop”** and **“sell stop”**, which is possible in most trading platforms.

Market order – is the client's instruction to the brokerage company to buy or sell at the current price instantly.

Pending order – is the client's instruction to the brokerage company to buy or sell at a pre-defined price in the future.

Order “buy stop” – is a pending order to buy provided that the price is equal to the pre-defined value. The current price level is lower than the value of the placed order. Orders of this type are usually placed in anticipation of that the security price, having reached a certain level, will keep on increasing.

Order “sell stop” – is a pending order to sell provided that the price is equal to the pre-defined value. The current price level is higher than the value of the placed order. Orders of this type are usually placed in anticipation of that the security price, having reached a certain level, will keep on falling.

That approach may look really tempting, but needs considerable experience and understanding of the possible risks.

Double bottom
Reversal of the trend

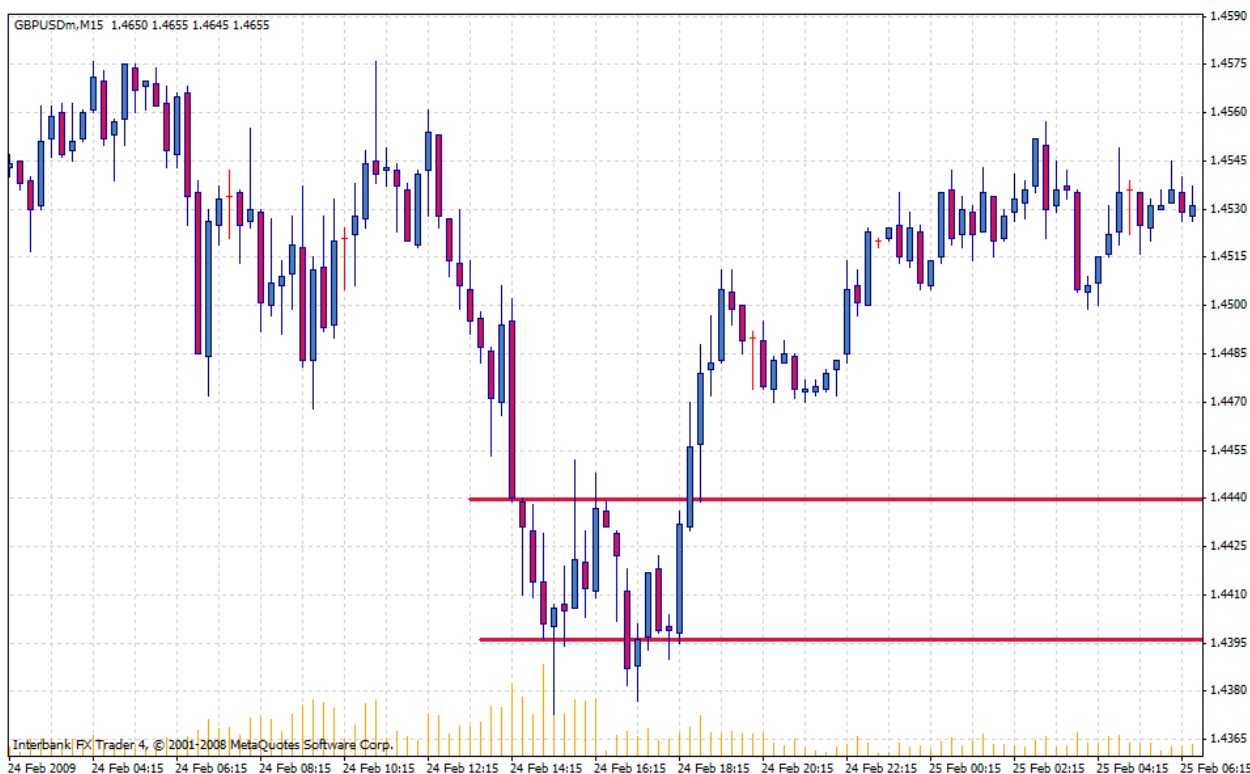
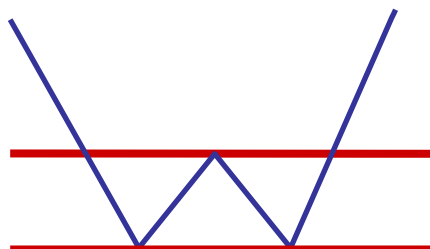


Fig. 16 **Double bottom**

Everything written above concerning “double top” is completely applicable to the “double bottom” pattern (Fig. 16), formed by two peaks of approximately equal height below a horizontal resistance line.

Once again I draw your attention to the fact, that the successful application of the pattern recognition analysis is most likely in conjunction with other techniques. For instance, technical indicators like “Bollinger Bands” and “Money Flow Index” (MFI) could provide information about an expected time and direction of a breakthrough. See section on **Indicators** (to be published).

Practical exercise to consolidate pattern recognition skills

For the successful application of the analysis it is not enough just to read once and be “aware” of the patterns on the price charts. It is necessary to work out a skill of fast pattern recognition in the process of it being formed when the shapes are uncompleted, preferably on different timeframes.

Use you trading application or training software to find on historical data examples of each pattern and mark the lines of support and resistance for each of the mentioned above formations. See and memorise, how they look like on the different timeframes.

Check for updates at www.geoinvest.info