# FXSTREET

# Market Impact Studies

## USERS GUIDE

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# Introduction

Which are the macro-economic indicators of **highest reactivity?** Which pairs are **mostly impacted by macro-economic** data releases? How can I assess **the risk and the reward** of trading an economic data release? These questions are addressed by the Market Impact Studies.

You can see the Market Impact Studies by clicking on any of the released economic data on the Calendar:
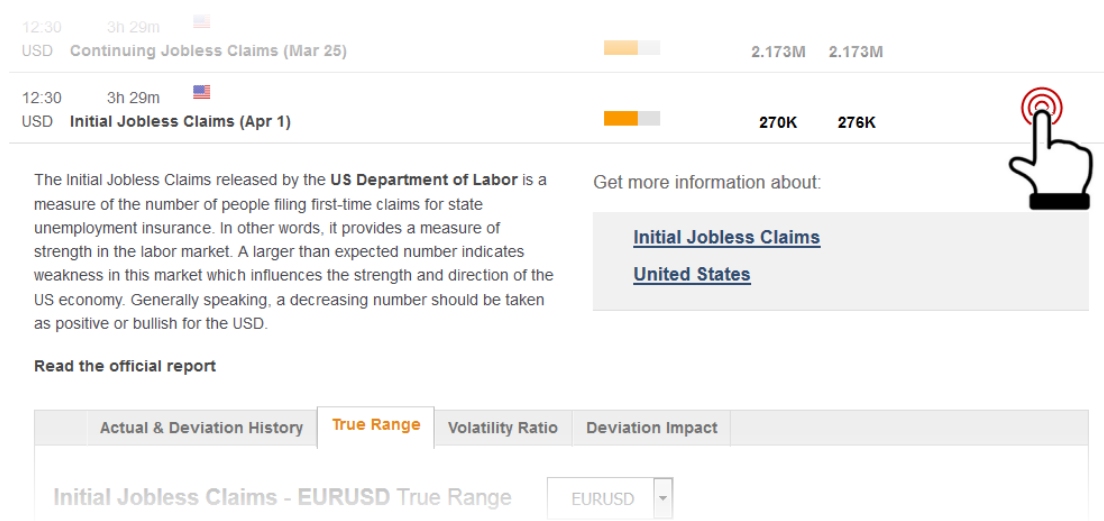


# Study 1: Actual & Deviation History

## *What does this indicator tell me?*

The Actual & Deviation History chart tells you if an economic data **surprised the market in the past compared to its expectation** (consensus). A surprise generally generates a bigger impact (more price movement) in the markets.
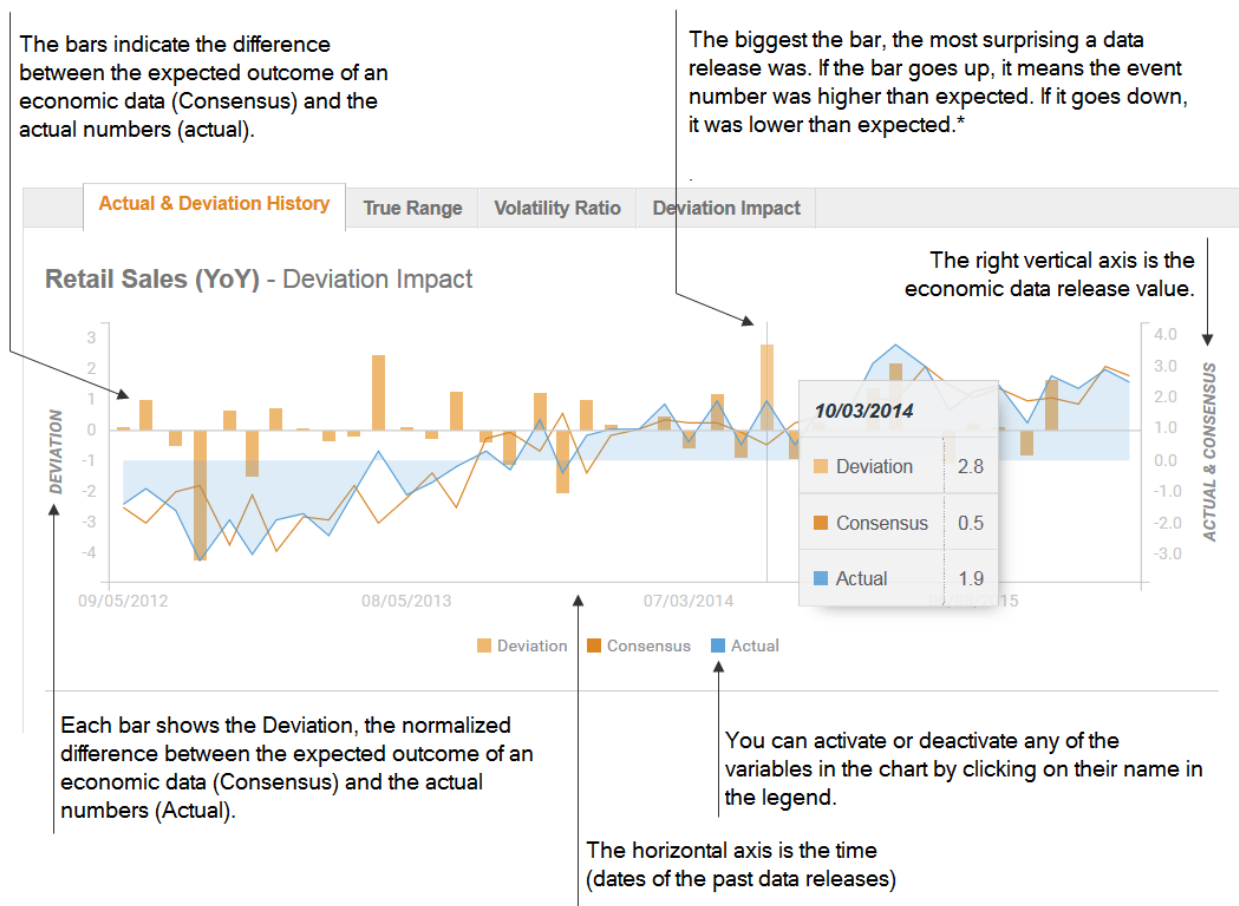This is also the place where to find time series of the particular economic event.

## *Why is this study important?*

This is the information a **very short-term trader** needs to make an inmediate buy/sell decision. Is the surprise big, the trader will be looking for big rewards, is the surprise small, the opportunity may not be attractive.

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From a **risk management perspective**, a big surprise also leads to different actions than a small surprise. This assumes a weak market efficiency, ie that the forecasts are already included in the price and the actual readings above or below forecast influence the price.

For **non-scalping traders**, this study still provides useful information because it tells them if the market has overreacted to a large shock or underreacted to a small one, for instance. The only way to discover this is to compare the actual reaction to other reactions in the past for the same economical event.

## *How to interpret the chart?*

The bars indicate the difference between the expected outcome of an economic data (Consensus) and the actual numbers (actual).

The biggest the bar, the most surprising a data release was. If the bar goes up, it means the event number was higher than expected. If it goes down, it was lower than expected.*

| Actual & Deviation History | True Range | Volatility Ratio | Deviation Impact |

**Retail Sales (YoY)** - Deviation Impact

The right vertical axis is the economic data release value.

*10/03/2014*

| | |
|---|---|
| Deviation | 2.8 |
| Consensus | 0.5 |
| Actual | 1.9 |

09/05/2012    08/05/2013    07/03/2014

Deviation    Consensus    Actual

Each bar shows the Deviation, the normalized difference between the expected outcome of an economic data (Consensus) and the actual numbers (Actual).

You can activate or deactivate any of the variables in the chart by clicking on their name in the legend.

The horizontal axis is the time (dates of the past data releases)

Note: *Lower or higher does not mean negative or positive. If we look at GDP numbers, a higher number is generally seen as more positive for an economy and by so, the strength of its currency. If we look at unemployment data, a lower number is positively interpreted as it shows the economy of the country is improving.*

### *How is the Deviation calculated?*

The Deviation is a proprietary indicator. It is the ratio between the difference of consensus and actual numbers, and the **standard deviation of this difference for the previous 5 events**.

## Study 2: True Range

### *What does this indicator tell me?*

The True Range chart shows the **volatility of a currency pair in terms of pip variation 15 minutes and 4 hours after** the data release. That may indicate what potential this data has to move the markets again in the future.

### *Why is this study important?*

As a **news or event trader**, one needs to know what economic indicators represent an opportunity to trade. Economic calendars usually classify the releases with some sort of graphical distinction, but this method doesn't quantify the impact. Measuring the impact in effective terms will allow the trader to compare markets (pairs) and economic indicators and find the most market moving opportunities.
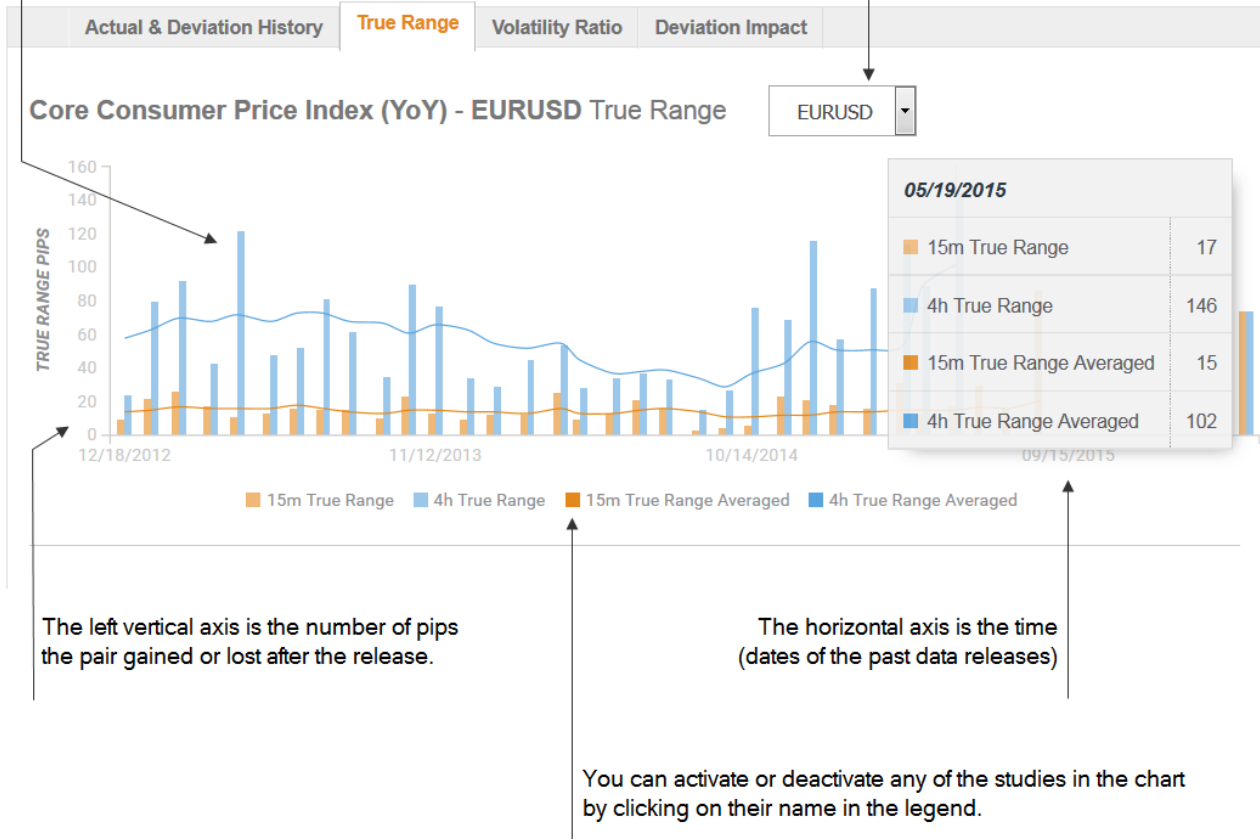


This study can also contribute to assess the risk contained in a determined announcement and help the trader to anticipate the size of the move and to be prepared to sustain the ensuing volatility.

# *How to interpret the chart?*

The bars indicate the volatility, in terms of True Range, of the currency pair 15 minutes and 4 hours after the economic data release. The higher the bar, the most volatile was the pair after the release. The lines show the 15 minutes and 4 hours True Range averaged.

You can select the currency pair using the dropdown list.

| Actual & Deviation History | True Range | Volatility Ratio | Deviation Impact |

**Core Consumer Price Index (YoY) - EURUSD** True Range

EURUSD

*05/19/2015*

| | |
|---|---|
| ▮ 15m True Range | 17 |
| ▮ 4h True Range | 146 |
| ▮ 15m True Range Averaged | 15 |
| ▮ 4h True Range Averaged | 102 |

■ 15m True Range  ■ 4h True Range  ■ 15m True Range Averaged  ■ 4h True Range Averaged

The left vertical axis is the number of pips the pair gained or lost after the release.

The horizontal axis is the time (dates of the past data releases)

You can activate or deactivate any of the studies in the chart by clicking on their name in the legend.

# **How are the indicators calculated?**

The True Range is the absolute value of the greatest of the following:

- Current High less Current Low
- Current High less Previous Close
- Current Low less Previous Close

The True Range Averaged is an average of the last 14 events True Range values.
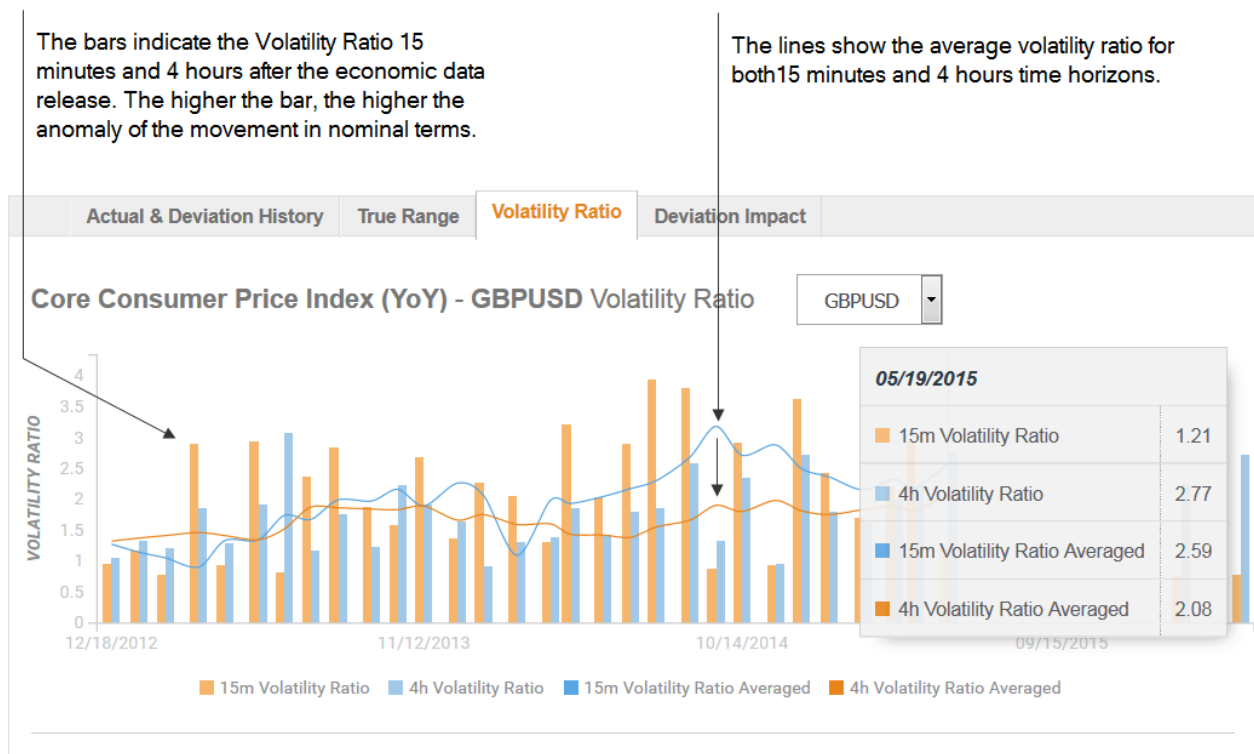
# Study 3: Volatility Ratio

## *What does this indicator tell me?*

This Volatility Ratio chart tells you if the **price movements** of a specific pair which were recorded in the aftermath of an economic release were **usual or exceptional**.

## *Why is this study important?*

While the True Range in the previous study measures any price movement after an economic event, it is not capable to tell us if the follow-through price move was really an impact or just a normal market move. To find it out, we need to put the price reaction into the context of the recent price structure. The Volatility Ratio tells us **whether the size of the move is greater than the usual market volatility** displayed by a certain currency pair.

## *How to interpret the chart?*

The bars indicate the Volatility Ratio 15 minutes and 4 hours after the economic data release. The higher the bar, the higher the anomaly of the movement in nominal terms.

The lines show the average volatility ratio for both 15 minutes and 4 hours time horizons.

| | | Actual & Deviation History | True Range | **Volatility Ratio** | Deviation Impact | |
|---|---|---|---|---|---|---|

**Core Consumer Price Index (YoY) - GBPUSD** Volatility Ratio    [ GBPUSD ▼ ]

**05/19/2015**

| | |
|---|---|
| ■ 15m Volatility Ratio | 1.21 |
| ■ 4h Volatility Ratio | 2.77 |
| ■ 15m Volatility Ratio Averaged | 2.59 |
| ■ 4h Volatility Ratio Averaged | 2.08 |

VOLATILITY RATIO — 4, 3.5, 3, 2.5, 2, 1.5, 1, 0.5, 0

12/18/2012        11/12/2013        10/14/2014        09/15/2015

■ 15m Volatility Ratio    ■ 4h Volatility Ratio    ■ 15m Volatility Ratio Averaged    ■ 4h Volatility Ratio Averaged

### *How are the indicators calculated?*

The 15-minute Volatility Ratio is the 15-minute True Range divided by the 15 minute True Range Average of the last 14 events.
The 4-hour Volatility Ratio is the 4-hour True Range divided by the 4-hour True Range Average of the last 14 events.

## Study 4: Deviation Impact

### *What does this indicator tell me?*

This scatter plot chart relates the "Surprise factor", i.e. the Deviation, with the True Range. It tells me **how volatile a currency pair can be once a specific data release hits** the markets.
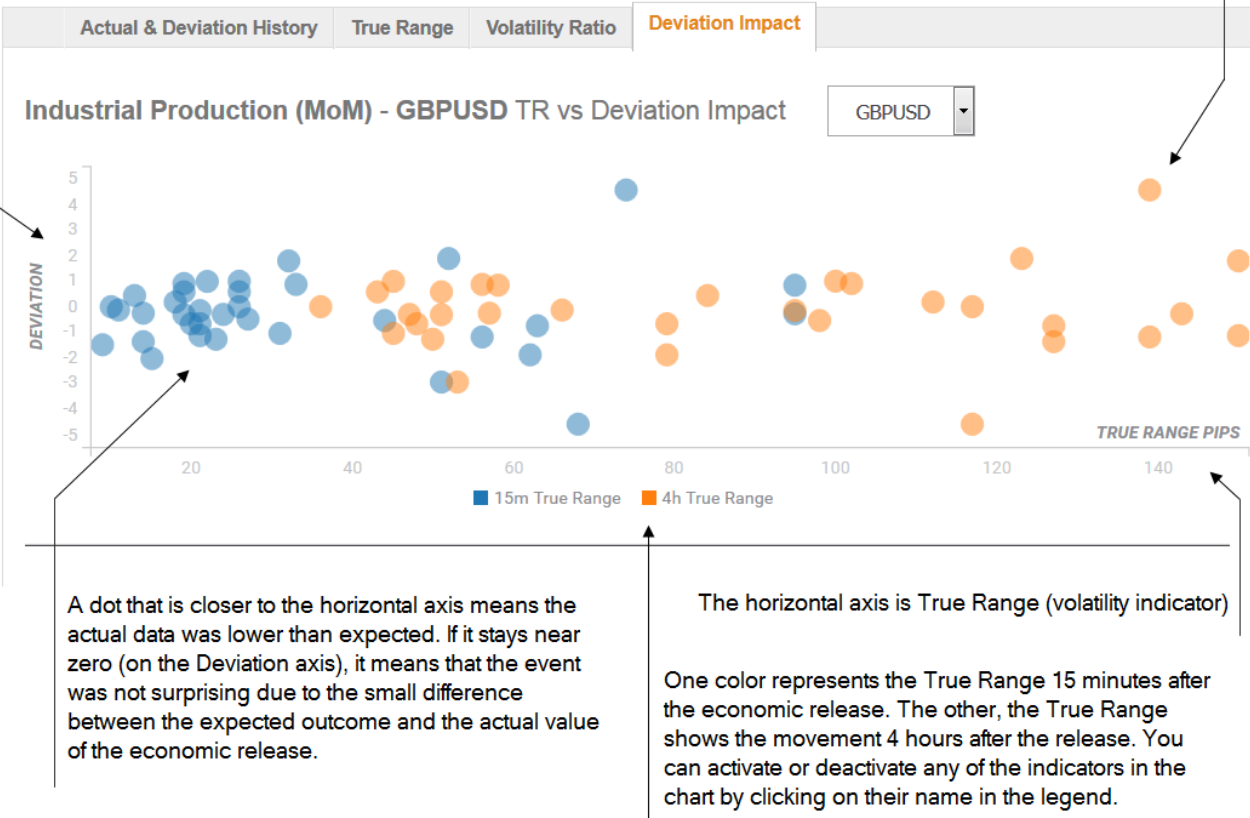
### *Why is this study important?*

This study can help traders deduce **how much a pair can move in the future** based on the deviation between the actual number and the expected number of an upcoming economic data release, i.e., how much of a deviation we must see in a certain event to have a trading opportunity. Choosing the right deviation trigger is the key to effective news trading. It can be also atractive for **binary traders/brokers, and options traders/brokers**.

### *How to interpret the chart?*

(see graph on next page)

The left vertical axis is the Deviation (a proprietary indicator showing the difference between expected outcome of a data and its actual outcome)

The dots in the chart are each of the events of its kind occurred on different dates. The more at the right the dot is, the more volatile a currency pair was after that particular event. A dot that is further from the horizontal axis on the chart means the actual data has been higher than expected.
If you hover your mouse over a dot, you will see more details about it such as the Volatility Ratio value and the particular date of the economic data.*

A dot that is closer to the horizontal axis means the actual data was lower than expected. If it stays near zero (on the Deviation axis), it means that the event was not surprising due to the small difference between the expected outcome and the actual value of the economic release.

The horizontal axis is True Range (volatility indicator)

One color represents the True Range 15 minutes after the economic release. The other, the True Range shows the movement 4 hours after the release. You can activate or deactivate any of the indicators in the chart by clicking on their name in the legend.

*Note:* Lower or higher does not mean negative or positive. If we look at GDP numbers, for example, a higher number is generally seen as more positive for an economy and by so, the strength of its currency. If we look at unemployment data, a lower number is positively interpreted as it shows the economy of the country is improving.

## How are the indicators calculated?

The Deviation is the ratio between the difference of the Consensus and Actual numbers, and the standard deviation of this difference for the previous 5 events.

The True Range being the absolute value of the greatest of the following:

- Current High less Current Low
- Current High less Previous Close
- Current Low less Previous Close

The True Range Averaged is an average of the last 14 events True Range values.

The 15-minute Volatility Ratio is the 15-minute True Range divided by the 15-minute True Range Average of the last 14 events.

The 4-hour Volatility Ratio is the 4-hour True Range divided by the 4-hour True Range Average of the last 14 events.