ANNOTATION OF ECONOMIC EVENTS: GUIDELINES

Definition

The goal of this annotation task is the identification of mentions of economic events in articles from a financial newspaper. These events are specific economic events that can have an influence on the financial markets. For example, if a news item predicts that the *profit of a certain company will drop*, this can cause investors to have a negative perception of that company, and consequently cause the value of the company's share to drop.

Use

Your manual economic event annotations will be used to train a system that can automatically detect these events. Such a system can be useful for researchers in the financial domain who want to investigate the effect of certain events on the financial markets. For studies like this, researchers usually have to go through all published news articles manually to see whether they discuss certain events. This is of course a time-consuming process. A system that can automatically detect these events allows researchers to process more news data in less time.

Annotation scheme

At the moment, we focus on annotating certain **company-specific events**, which can have an impact on the perception and value of a company. An example of such an event can be the fact that a company *announces a merger or acquisition*.

We detect 10 **categories** of company-specific events, each of which is related to a certain **economic concept**. An example of an event category is *'Profit'*, a category that holds all events relating to the profit of a company (e.g. a profit warning, announcement about a profit decrease, etc.).

An event category can hold various more specific event **subtypes**. These subtypes are determined by means of certain **attributes**. For instance, in the category 'Profit', an event can be the *prediction of a profit increase*. For this event, we mark the attributes *'Profit_Increase'* and *'Profit_Forecast'*. Each event category has an 'Other' attribute, which can be used for events that you regard as relevant economic events within the category in question, but which cannot be marked with 1 of the other provided attributes.

Below, an overview is given of the 10 event categories that should be identified. For each category, we list the different attributes that can be marked to determine the subtype of an event.

Profit

- Profit_Declaration: declaration of profit figures
- Profit_Forecast: prediction of profit figures
- Profit_Negative: loss was made
- Profit_Positive: profit was made
- Profit_Increase: profit increase
- Profit_Decrease: profit decrease
- Profit_Stable: profit is stable
- Profit_HigherThanExpected: profit is higher than expected
- Profit_LowerThanExpected: profit is lower than expected
- Profit_AsExpected: profit is as expected
- Profit_Other

Turnover

- Turnover_Declaration: declaration of turnover figures
- Turnover_Forecast: prediction of turnover figures
- Turnover_Increase: turnover increase
- Turnover_Decrease: turnover decrease
- Turnover_Stable: turnover is stable
- Turnover_BetterThanExpected: turnover is better than expected
- Turnover_WorseThanExpected: turnover is worse than expected
- Turnover_AsExpected: turnover is as expected
- Turnover_Other

SalesVolume

- SalesVolume_Declaration: declaration of sales volume figures
- SalesVolume_Forecast: prediction of sales volume figures
- SalesVolume_Increase: sales volume increase
- SalesVolume_Decrease: sales volume decrease
- SalesVolume_Stable: sales volume is stable
- SalesVolume_BetterThanExpected: sales volume is better than expected
- SalesVolume_WorseThanExpected: sales volume is worse than expected
- SalesVolume_AsExpected: sales volume is as expected
- SalesVolume_Other

ShareRepurchase

- ShareRepurchase_Announcement: announcement of a share repurchase
- ShareRepurchase_Forecast: forecast of a share repurchase

Debt

- Debt_Announcement: announcement about debt
- Debt_Forecast: forecast about debt

- Debt_Increase: debt increase
- Debt_Reduction: debt reduction
- Debt_Restructuring: debt restructuring
- Debt_Other

QuarterlyResults

- QuarterlyResults_Publication: declaration of quarterly results
- QuarterlyResults_Forecast: forecast of quarterly results
- QuarterlyResults_Strong: strong quarterly results
- QuarterlyResults_Weak: weak quarterly results
- QuarterlyResults_Better: quarterly results gotten better
- QuarterlyResults_Worse: quarterly results gotten worse
- QuarterlyResults_Stable: quarterly results are stable
- QuarterlyResults_BetterThanExpected: quarterly results are better than expected
- QuarterlyResults_WorseThanExpected: quarterly results are worse than expected
- QuarterlyResults_AsExpected: quarterly results are as expected
- QuarterlyResults_Other

TargetPrice

- TargetPrice_Announcement: announcement about target price
- TargetPrice_Forecast: forecast about target price
- TargetPrice_Raise: target price raise
- TargetPrice_Reduction: target price reduction
- TargetPrice_Maintained: target price maintained
- TargetPrice_Other

BuyRating

- BuyRating_Announcement: announcement about buy rating
- BuyRating_Forecast: forecast about buyrating
- BuyRating_Buy: rating = buy
- BuyRating_Outperform: rating = outperform
- BuyRating_Hold: rating = hold
- BuyRating_Underperform: rating = underperform
- BuyRating_Sell: rating = sell
- BuyRating_Upgrade: rating upgraded
- BuyRating_Downgrade: rating downgraded
- BuyRating_Maintained: rating maintained
- BuyRating_Other

Dividend

- Dividend_Announcement: announcement about dividend

- Dividend_Forecast: forecast about dividend
- Dividend_Payment: dividend is paid
- Dividend_NoPayment: no dividend is paid
- Dividend_Raise: dividend raise
- Dividend_Reduction: dividend reduction
- Dividend_Stable: dividend is stable
- Dividend_Other

MergerAcquisition

- MergerAcquisition_Announcement: announcement of a merger/acquisition
- MergerAcquisition_Forecast: forecast of a merger/acquisition
- MergerAcquisition_NoMergerAcquisition: merger/acquisition no longer planned
- MergerAcquisition_Other

Instructions for the use of brat

LOGGING IN

The texts that should be annotated can be found under this link (use Google Chrome or Safari):

http:// ██████████████████████████

username: ███████████████
paswoord: ███████████████

Once you are logged in, you can open the directory with your name and subsequently one of the texts. Before you can start annotating, you have to log in again at the top right hand corner of the screen (using 'student' as the username and password).

ANNOTATION PROCEDURE

1) Mark all mentions of events from the event categories listed above. Mark the text span that best describes the event and subsequently select the annotation type corresponding to the event category in question, e.g. 'Profit':

InBev-dochter AmBev **boekt fors meer winst** [Profit]

Sometimes one text span can be annotated in multiple event categories. If this is the case, the text span should be marked 2 or more times, and each time a different event category should be selected, e.g.:

Sectorgenoot KBC noteert alweer lager dan voor **de bekendmaking van een kwartaalwinst die ' onderliggend ' zowat 17 procent hoger lag dan verwacht** . [QuarterlyResults] [Profit]

It is also possible to mark a discontinuous text span as an event, by marking 2 (or more) text spans and then linking these spans by means of a 'same_span' relation, e.g.:

Woensdag **maakte** [Profit] InBev voor beurstijd **een stijging van zijn nettowinst met 42 procent bekend tot 719 miljoen euro** [Profit] . ‑‑‑‑same span‑‑‑‑

2) Mark the necessary attributes to determine the subtype an event belongs to. Multiple attributes can be marked for 1 event, e.g.:
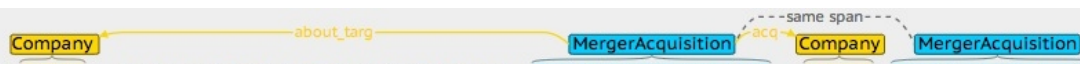
Sectorgenoot KBC noteert alweer lager dan voor **de bekendmaking van een kwartaalwinst die ' onderliggend ' zowat 17 procent hoger lag dan verwacht** . [QuarterlyResults] [Profit]

-> 'Profit_Declaration' and 'Profit_HigherThanExpected'

3) Mark the name of the company the event relates to, since the annotation task is targeted at identifying company-specific events. Mark the mention of the company name that occurs the closest to the marked event and link the event to the company name by means of an 'is_about_company_ relation, e.g.:

InBev-dochter AmBev boekt fors meer winst

In case of a merger event in the category MergerAcquisition, the event can be linked to multiple companies by means of the 'is_about_company' relation type. In case of an acquisition event, annotators can indicate the acquiring company and the acquired company by means of resp. an 'is_about_acquirer' and an 'is_about_target' relation, e.g.:

het bericht dat Varian , een vermeende branchegenoot van IBA , werd overgenomen door Agilent voor 1,5 miljard dollar .

4) Use the Confidence attribute to indicate how certain you are that your event annotation is correct.