

Let us illustrate use of relations defined in this section for identifying data type for stock relative difference $\Delta(x)$. Let $PS(x,y)$ be defined as follows

$$PS(x,y) \Leftrightarrow \Delta(x) > \Delta(y)$$

and a financial expert agrees that $PS(x,y)$ makes sense. Now we can identify its type. This is a strong ordering relation. Therefore, we can identify the Δ attribute as an attribute of the strong relational data type. Similarly we can define $PW(x,y) \Leftrightarrow \Delta(x) \geq \Delta(y)$ and identify Δ as an attribute of the weak relational data type. One can continue identify Δ as belonging to other data types listed in this section as well. One may wish to produce a predicate $PM(x,y,z)$,

$$PM(x,y,z) \Leftrightarrow \Delta(x) + \Delta(y) = \Delta(z).$$

There is little financial sense in this predicate, because the operation $(+)$ is not financially interpreted for Δ . The above considerations show that there are relations without a numeric representation. Therefore, the relational data representation in the first order logic is more general than a numeric representation.